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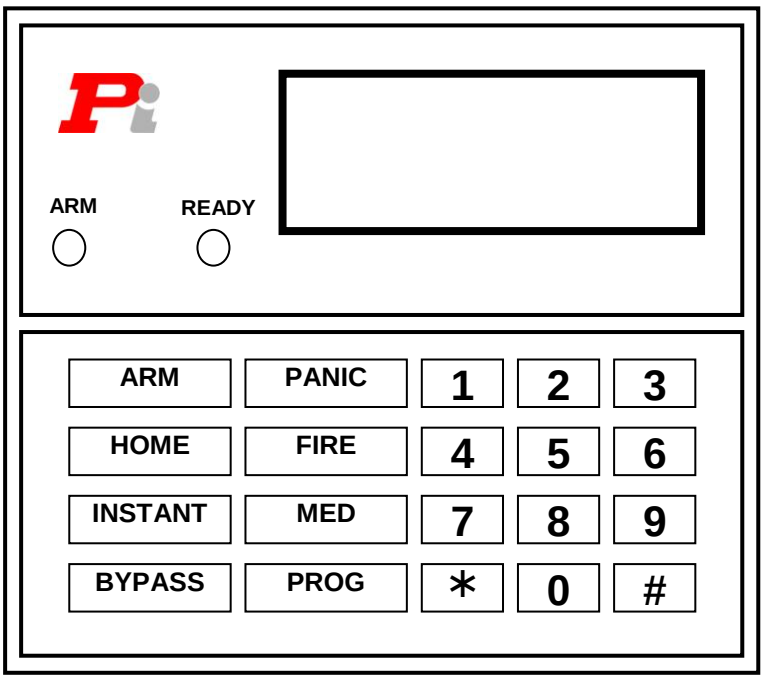
# Pi HSC505-32 LCD
# Home Security Controller

## User's Information Guide
## Beta version 1.01



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Congratulations on your purchase of the PI HSC505-32. The South African designed and manufactured solution to all your electronic security requirements.
Please take the time to read and familiarize yourself with the terms used throughout the user manual.

**Arm or Arm away -** The entire system or a partition is completely armed and secured.

**Arm home -** The system or partition is armed with certain zones being omitted that have been decided on by you and the installer, to allow free movement within the premises while the perimeter is armed. Normal entry procedures do apply.

**Arm home instant -** The system or partition is armed with certain zones being omitted that have been decided on by you and the installer, to allow free movement within the premises while the perimeter is armed. All entry and exit points are now instant.

**Armed cycle -** The period for which the alarm system or partition is armed.

**Auto arm -** The system will automatically arm at pre-programmed time of the day, each day if the system is disarmed. The system will not auto-disarm. Auto arm timers are user enabled and selected.

**Bypass** - A zone or zones are temporarily removed from the system or partition for one armed cycle. When the system or partition is disarmed, all bypassing automatically is removed.

**Chime** - A keypad buzzer annunciation for 1 second, when a zone is violated in the disarmed condition.

**Control code** - A user authority level that will only switch an output, used for access control, light switching, etc. This code is recorded in the historic log.

**Control panel** - The metal housing and electronics to which all peripheral equipment is connected.

**Cross partitioning -** The ability to control if authorized, more than one partition from a single keypad.

**Delay -** A timer function incorporated with entry or exit procedures. A delay of the siren only for a period of 30 seconds if selected when home armed.

**Detector -** A device used to detect unauthorized activity in an area.

**Disarm -** The period when the system or partition is switched off. Does not include panic, fire, medical, etc.

**Encrypted rolling code -** A code transmitted to the alarm system via a **Codex** remote transmitter, where each code is unique and can not be duplicated.
Each remote is identifiable as a valid user and recorded as such in the historic log.

**Entry / exit** - Refers to the dedicated route required to be followed when entering or exiting the premises. These are timed features. The system has independent primary and secondary entry timers and a global exit timer.

**Faulted** - A zone or input is open or activated.

**Fire -** A 24-hour active input to alarm, on the activation of a fire detector. The siren output will also be pulsed instead of constant.

**Historic log -** The control panel stores the last 255 events and conditions in a non volatile, non erasable memory.



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**Home -** The system or partition is armed with certain zones being omitted that have been decided on by you and the installer, to allow free movement within the premises while the perimeter is armed. Normal entry procedures do apply.

**Input** - A terminal on the control panel that a detector is connected to for alarm purposes.

**Instant -** A zone or input will create an immediate alarm condition when armed.

**Keypad -** The user interface to the control panel from which all commands and functions are carried out.

**Keypad tamper** - After 21 incorrect key depressions on the keypad the system will go into a keypad tamper condition. Entry of a valid 4-digit user code will clear this condition.

**Output** - A terminal on the control panel that would be used to switch external peripherals such as lights, sirens, strobe lights, gate control, etc.

**Medical** - A medical key is provided on the keypad to provide local keypad buzzers as an audible warning, as well as report to the alarm monitoring company.

**Memory -** After any alarm condition and a valid 4-digit user code has been entered the keypad will display “Memory “ and the alarm condition that was present.
Any 24-hour input that is triggered in the disarmed mode will also be displayed as a memory alarm. Entering of a valid 4-digit user code will clear the memory condition.

**Panic -** An 24-hour input to provide local warning and/or remote communications to the alarm monitoring company. These panic points could be either fixed, portable or remote, or the panic key on the keypad.

**Partition -** An area consisting of one or more zones acting independently of any other areas. A partition is controlled via its own keypad as if it were a separate control panel. Users are assigned to operate in one or more partitions. During the system programming cross partitioning can be setup.

**Phone me number -** A telephone or cell number could be entered to contact you on your cell phone or other telephone in the event of an alarm condition. Change as necessary to follow where-ever you may go. A voice module could be incorporated to provide a user recorded message.

**Reset -** Clear an alarm condition by entering a valid 4-digit user code.

**System ready -** All zones are closed and secure. System is ready for arming.

**System not ready -** One of more zones are open or violated. These zones must be closed or if faulty, bypassed before the system may be armed.

**Tamper** - If programmed as tamper, the wiring and detectors are supervised on a 24-hour bases against tampering.

# Error conditions:

**Comms fail** - The system will report any failure in one of the 3 communications lines:
***Tele-*** the onboard communicator failed a successful transmission to the alarm monitoring center.
***Radio-*** when using the PI serial radio transmitter, a failure between the control panel and the radio transmitter will be reported.
***Buss-*** an error has occurred on the system communication line to keypads, etc.



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**Low battery** - The on board battery is not charged to capacity and if left could result in a system failure. Usually due to mains power switched off.

**Mains failure** - The ac mains voltage has been interrupted to the control panel. Failure to rectify this condition will lead to a low battery condition.

# Arming with premises vacated:

**Arm away:**
- Close all doors, etc.
- Keypad display “System ready”.
- Enter 4-digit user code.
- Keypad display “Exit now”.
- Exit via exit route and lock premises within the prescribed exit time.
- All zones are armed.

**Disarm system:**
- Open entry door, keypad will buzz:
  Continuous buzz = system normal. Enter 4-digit user code to disarm. Keypad displays system information.
  Intermittent buzz = Alarm condition. Use caution when entering premises. Keypad display alarmed zones.
- Enter 4-digit user code. All audible warnings stop.
- Keypad displays “Alarm memory” zones.
- Enter 4-digit user code again to clear the memory condition.
- Keypad displays system information.
- All zones except 24hour live zones are now disarmed.

# Arming with premised occupied:

**Home arm:**
- Press "Home" key and enter a 4-digit user code.
- Keypad displays “Arm & Home”.
- All zones are armed except zones programmed as home zones.
- Normal entry exit functions apply.

**Welcome mode:**
- While system is home armed, pressing of the “Home” key enables a 2 minute timer on the entry exit doors, allowing entry or exit from within the protected area without having to disarm the system.
- These points will revert back to their normal armed state at the end of this timer.

**Instant arming:**
- While armed in the home mode, press the "Instant" key for 2 seconds.
- Keypad displays “Armed home instant”.
- All entry exit delay points are now instant zones.
- To revert back to home arm, press the "Instant" key for 2 seconds.

**Disarm system:**
- Entering of a 4-digit user code in any of the above conditions will disarm the system.

**Bypassing of a zone:**
- If a zone is faulty, the system cannot be armed until the zone has been bypassed.
- Press “Bypass” key.
- Keypad displays ”Enter, use code to bypass".
- Enter a 4-digit user code.



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- Keypad displays ”Enter zone number 00”.
- Enter 2-digit zone number to be bypassed.
- Keypad displays “Bypassed zone xx”.
- To bypass multiple zones, repeat above steps per zone.
- To remove bypass from a zone, repeat the same procedure as to bypass.
- All bypassing of zones is automatically removed after the system has been armed, as is then disarmed.
- If 4 beeps are heard, this zone may not be bypassed.

**Arming via a remote control**

- After vacating the premises press the designated button for arming/disarming
- The siren will give a single chirp (if selected)
- The system is now armed

If no chirp is heard and it has been selected **the system has not armed.**

**Disarming via a remote control**

- Before entering the premises press the designated button for arming/disarming
- The siren will give a double chirp (if selected)
- The system is now disarmed

If the siren gives a triple chirp **use caution** the alarm system has activated in your absence.

# User programmable functions:

The user can program various features from the keypad, which are user friendly and menu driven.

The following options are available to root, super and master users only.

0. Add, change or delete 4-digit user pin numbers.
1. Display zones and descriptors.
2. Enable or disable chime function.
3. Edit chime zones.
4. Enable or disable a 30 seconds siren delay timer when armed “Home”.
5. Enable or disable keypad alarm buzzer.
6. Set panels date and time.
7. Set panels auto arm state and time.
8. Set call me number.
9. Enrolling codex remote transmitters.

**To enter user programming:**

- Press “Prog” key.
- Keypad displays ”Enter user code”.
- Enter 4-digit user code.
- Keypad displays ”Enter key 0 to 8” “Home = exit”.
- Enter the desired selection from the list above.
- To select a different option, press “Prog” key and make a new selection.
- To exit the user menu, press “Home” key.

**Add or change user pin code:**

- Enter user programming.
- Select 0.
- Keypad displays “Enter user codes” “**#** to continue”.
- Press # key.
- Keypad displays “Enter user index”.
- Select user index number 01 to 32.
- Keypad displays “User code xxxx”.



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- Enter 4-digit pin number _____ or the bypass key to delete an existing user.
- Keypad displays “Authority part 01”.
- Enter desired user authority:

  **00 root** - allows all access functions to all authorized partitions and programming of all user levels.
  01 super user - allows all functions including changing of user codes level 2 and downwards in authorized partitions.
  02 master user - allows all access functions and user programming in its allocated partition only.
  03 normal user - allows all access functions but no user programming in its authorized partition only.
  04 arm/disarm - bypass only.
  05 duress user - arms and disarms with normal indications but communicates a silent duress/panic signal to the monitoring center.
  06 arm only - user allows arming of the system only.
  07 control code - assignable to a trigger output only, which is recorded in the historic log used as access control, etc.
  08 disabled - no user functions.

- Press # key.
- Keypad displays “authority part 02”.
- Enter desired authority level for part 2.
- Press # key.
- Repeat for partitions 3 and 4.
- Keypad displays “Prog “ to save.
- Press “Prog" key to save the user setup.
- System returns to “Next user”.
- Repeat for all additional users to be entered into the system.
- Press “Home“ to exit user programming.

**Display zone descriptors:**
- Enter user programming mode.
- Select 1.
- Press # to accept.
- Keypad displays “Display zone dir “ “Select 01 to 32”.
- Enter zone number to view.
- Press # to accept.
- Keypad displays that zones details, including chime status, then scrolls through the remaining zone details in the partition.
- To exit this mode press ”Home” key.

**Enable or disable chime:**
- Enter user programming.
- Select 2.
- Press # to accept.
- Keypad displays “Set chime” “1 = on 2 = off”.
- Make selection as required.
- Keypad displays “Enabled” or “Disabled”.
- To exit this mode, press the “Home” key.
- Keypad returns to normal operation.

**Edit chime zones:**
- Enter user programming.
- Select 3.
- Press # to accept.
- Keypad displays “Z01 chime “on” or “off”.
- Press key 1 to enable or key 2 to disable.
- Press “Instant” key for next zone.
- To exit this function, press the ”Home” key.



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**Enable 30 second siren delay when armed in the HOME mode:**

- Enter user programming.
- Select 4.
- Press # to accept.
- Keypad displays “30 second siren delay” “ 1 = on 2 = off”.
- Make selection as required.
- Keypad displays “Enabled” or “Disabled”.
- To exit this mode, press the ”Home” key.
- Keypad returns to normal operation.

**Enable or disable keypad alarm buzzer:**

- Enter user programming.
- Select 5.

- Press # to accept.
- Keypad displays “Keypad buzzer” “1 = on 2 = off”.
- Make selection as required.
- Keypad displays ”Enabled” or “Disabled”.
- To exit this mode, press the “Home” key.
- Keypad returns to normal operation.

**Set panel date and time:**

- Enter user programming.
- Select 6.
- Press # to accept.
- Keypad displays “Set time and date” “hxx: mxx”.
- Enter hours in the 24-hour mode, enter minutes.
- Keypad displays “Set date” “dxx:mxx:yxx”.
- Enter day, month, year as double digits.
- Keypad returns to normal operation.

**Set auto-arm mode and time:**

- Enter user programming.
- Select 7.
- Press # to accept.
- Keypad displays “Set auto-arm mode” ,”Select 1, 2 or 3".
- Level 1 - auto arm away.
- Level 2 - auto arm home.
- Level 3 - auto arm home instant.
- Make selection as required.
- Keypad displays “# to accept”.
- Press #.
- Keypad displays “Auto-arm and selected mode” , “Time hxx:mxx”.
- Enter desired auto-arm time (A time of 24:00 will disable auto-arm functions).
- Keypad returns to normal operation.

**Setting phone me number:**

- Enter user programming.
- Select 8.
- Press # to select.
- Keypad displays “Prog to save number”.
- Enter telephone or cell number.
- Press “Prog” key.
- Keypad displays ”Number saved, home to exit”.
- Press “Home" key.
- Keypad returns to normal operation.



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- **Entering a Codex remote transmitter**
- Enter user programming.
- Select 9.
- Press # to select.
- Keypad displays “Enter remote 1 to add, 2 to delete”.
- Press 1
- Keypad display “ Enter remote number”
- Enter user number o1 to 32, corresponding to the user that the remoter will be identified with.
- Keypad displays ”Press a button now ”.
- Press any button on the remote transmitter.
- Keypad displays “Remote programmed “
- Keypad returns to normal operation mode
- Repeat for each transmitter

**Deleting a codex remote transmitter**
- Enter user programming.

- Select 9.
- Press # to select.
- Keypad displays “Enter remote 1 to add, 2 to delete”.
- Press 2
- Keypad displays “Enter number to delete”
- Enter remote number 01 to 32
- Keypads displays “Press **#** to delete
- Press # key
- Keypad displays “Remote removed”
- Keypad returns to normal

***NOTE***: THE BUTTON FUNCTIONS ON THE REMOTE ARE AN INSTALLER PROGRAMMING FUNCTION
The remote must be programmed from the keypad in the partition in which it is to be used

**Partitioning and cross partitioning:**
- To enter into the cross partition mode, press the * key, followed by valid 4-digit user code.
- Keypad displays ”Enter part (1-4)” “0= arm 5= disarm”.
- To temporarily place the keypad into a different partition, enter the partition number required.
- The keypad will now act as normal in the required partition, provided the user code is authorized in this partition..
- To return to default partition, repeat as above, and select the default partition or if no functions carried out on the keypad for 120 seconds, the keypad will automatically revert back to the default partition.
- Selecting the 0 key will arm all the partitions that user is authorized in simultaneously.
- If a partition is not ready, the keypad will switch to that partition and display the faulted zone, rectify or bypass the zone.
- Press * key again followed by 0. All partitions will now arm.
- Keypad displays “Armed p? ? ? ? “ “Exit now”.
- Selecting the 5 key will disarm all partitions that the user is authorized in.

**Viewing partition status:**
- Press the * key, followed by valid 4-digit user code.
- Keypad displays ”Enter part (1-4)” “0 = arm 5 = disarm”.
- Enter 9.
- Keypad displays ”Armed ? ? ? ? “, “Alarm ? ? ? ? “, indicating the armed partitions and the partitions that are in an alarm condition.



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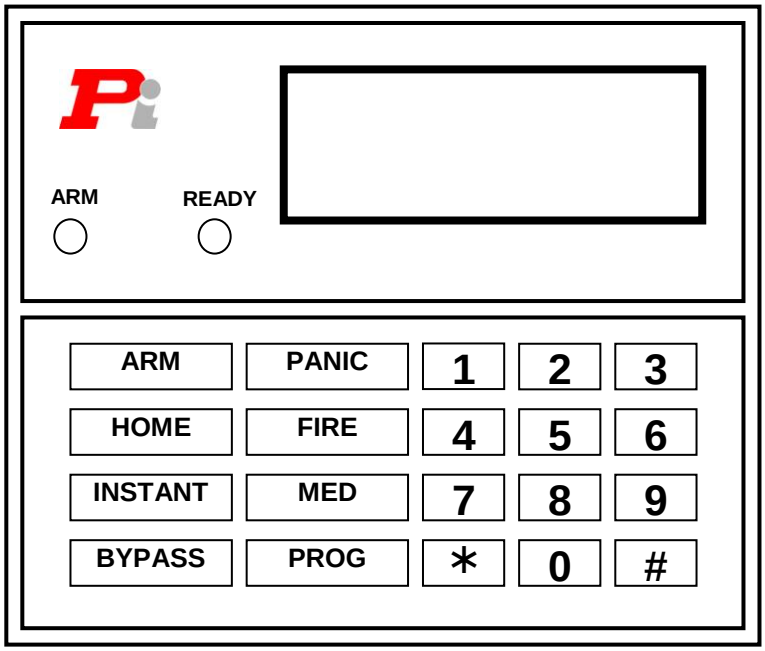
# Pi HSC505 - E
# Home Security Controller
# 8 to 32 Zone LCD

# Installation Manual




| Release Versions | Release History | Date |
|---|---|---|
| R2.00 | First production release | 20-09-04 |
| R3.00 | QE920 wireless module added | 19-8-08 |



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# Introduction:

The PI HSC505-32 is a South African designed and manufactured Security System, carrying full ICASA licensing and complying with all safety regulations and specifications.

## Features:

- 8 programmable EOL inputs, expandable to 32 inputs.
- 3 dedicated normally open 24-hour inputs (programmable).
- Tamper programmable per zone input (dual EOL).
- Local keypad buzzer zones.
- 4 partitions plus common area.
- 4 programmable voltage trigger outputs, expandable to 64 outputs.
- Triggers programmable per zone and/or globally.
- Programmable positive or negative trigger switching as latched, timed or toggle functions.
- 8 programmable LCD display keypads.
- Keypads have an EOL input and a trigger output.
- Single key emergency functions.
- Programmable quick arming functions.
- Auto arm in one of 3 modes per partition.
- Home zones per partition.
- Arm when faulted for exit purposes per partition.
- Bypass enable per zone.
- Independent entry and exit timers per partition.
- Home automation.
- Siren trip counter.
- Remote encrypted code arming per partition with audible indications.
- New serial bus line radio transmitter capable of point ID format reporting.
- Local or remote up/down loading.
- Plug-in landline communicator 4x1 express, 4x2 express, ademco point id, and 4x2 pulse format.
- Extensive lightning and panel input protection.

## Expander options:

- Onboard plug-in 8-zone expander.
- Remote bus line 8 in, 4 out expander.
- Keypads x 1 EOL input.
- Remote bus line 8 relay output module.
- Remote bus receiver.



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Congratulations on your purchase of the PI HSC505-E. The South African designed and manufactured solution to all your electronic security requirements.

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**Arm or Arm away** - The entire system or a partition is completely armed and secured.

**Arm home** - The system or partition is armed with certain zones being omitted that have been decided on by you and the installer, to allow free movement within the premises while the perimeter is armed. Normal entry procedures do apply.

**Arm home instant** - The system or partition is armed with certain zones being omitted that have been decided on by you and the installer, to allow free movement within the premises while the perimeter is armed. All entry and exit points are now instant.

**Armed cycle** - The period for which the alarm system or partition is armed.

**Auto arm -** The system will automatically arm at pre-programmed time of the day, each day if the system is disarmed. The system will not auto-disarm. Auto arm timers are user enabled and selected.

**Bypass** - A zone or zones are temporarily removed from the system or partition for one armed cycle. When the system or partition is disarmed, all bypassing is automatically removed.

**Chime** - A keypad buzzer annunciation for 1 second when a zone is violated in the disarmed condition.

**Control code** - A user authority level that will only switch an output, used for access control, light switching, etc. This code is recorded in the historic log.

**Control panel** - The metal housing and electronics to which all peripheral equipment is connected.

**Cross partitioning -** The ability to control, if authorized more than one partition from a single keypad.

**Delay -** A timer function incorporated with entry or exit procedures. A delay of the siren only for a period of 30 seconds, if selected when home armed.

**Detector -** A device used to detect unauthorized activity in an area.

**Disarm -** The period when the system or partition is switched off. Does not include panic, fire, medical, etc.

**Dual end of line -** Typical wiring to include a tamper and alarm condition on the same pair of wires, using 2 x end of line resistors (see diagram on page 6).

**Entry / exit** - Refers to the dedicated route required to be followed when entering or exiting the premises. These are timed features. The system has independent primary and secondary entry timers and a global exit timer.

**Faulted** - A zone or input is open or activated.

**Fire -** A 24-hour active input to alarm on the activation of a fire detector. The siren output will also be pulsed instead of constant.

**Historic log -** The control panel stores the last 255 events and conditions in a non-volatile, non-erasable memory.

**Home -** The system or partition is armed with certain zones being omitted that have been decided on by you and the installer, to allow free movement within the premises while the perimeter is armed. Normal entry procedures do apply.



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**Input** - A terminal on the control panel that a detector is connected to, for alarm purposes.

**Instant -** A zone or input will create an immediate alarm condition when armed.

**Keypad -** The user interface to the control panel, from which all commands and functions are carried out.

**Keypad tamper** - After 21 incorrect key depressions on the keypad, the system will go into a keypad tamper condition. Entry of a valid 4-digit user code will clear this condition.

**Output** - A terminal on the control panel that would be used to switch external peripherals such as lights, sirens, strobe lights, gate control, etc.

**Medical** - A medical key is provided on the keypad to provide local keypad buzzers as an audible warning, as well as report to the alarm monitoring company.

**Memory -** After any alarm condition and a valid 4 digit user code has been entered the keypad will display “Memory “ and the alarm condition that was present. Any 24-hour input that is triggered in the disarmed mode will also be displayed as an alarm memory. Entering of a valid 4-digit user code will clear the memory condition.

**Panic -** A 24-hour input to provide local warning and/or remote communications to the alarm monitoring company. These panic points could be either fixed, portable or remote, or the panic key on the keypad.

**Partition -** An area consisting of one or more zones, acting independently of any other areas. A partition is controlled via its own keypad as if it were a separate control panel. Users are assigned to operate in one or more partitions, during the system programming cross partitioning can be setup.

**Reset -** Clear an alarm condition by entering a valid 4-digit user code.

**System ready -** All zones are closed and secure. System is ready for arming.

**System not ready -** One or more zones are open or violated. These zone must be closed or if faulty, bypassed before the system may be armed.

**Tamper** - If programmed as tamper, the wiring and detectors are supervised on a 24-hour basis against tampering (dual end of line).



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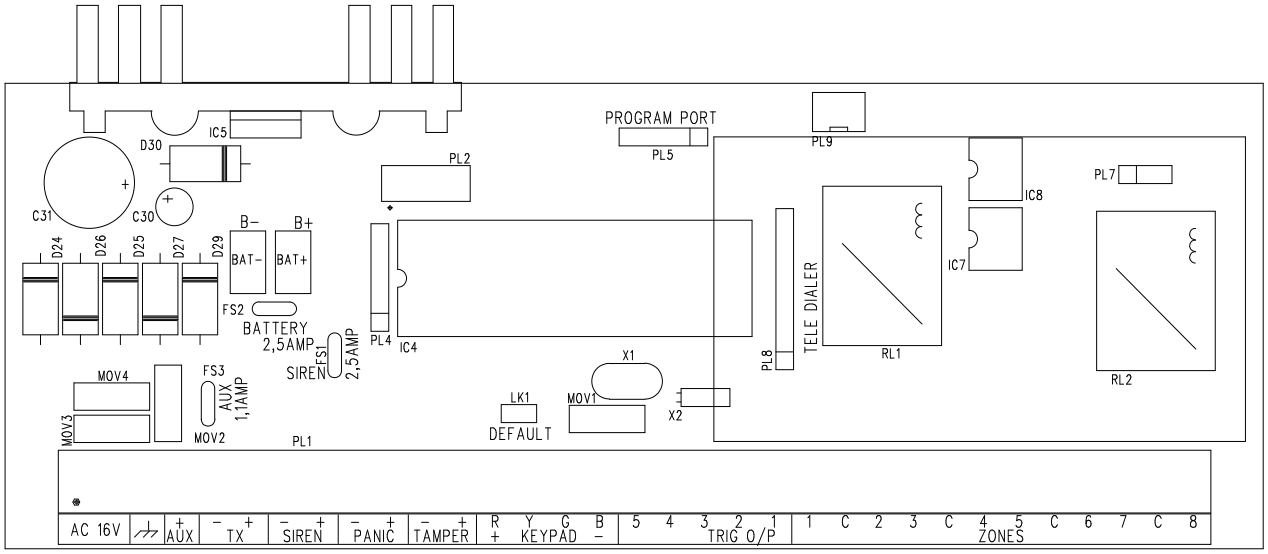


# Motherboard layout:

AC…….AC input maximum 16.5V 40va
(Earth)..... This **must** be connected to building earth were possible, alternately to mains earth
AUX + ..... 12V + to peripherals i.e. IR detectors, beams, etc. (Fused at 1 amp)
Negative to be taken from any negative or common.
TX + ..... Positive to Radio Transmitter (Fused at 3 amps)
TX - ..... Negative to Radio Transmitter
Siren - ..... Negative to Siren (Fused at 3 amps) and supervised See note below
Siren + ..... Positive to Siren
Panic -..... Panic input EOL resistor 2K7
Panic + ..... Panic input EOL resistor 2K7
Tamper- ..... Tamper Input NO to ground
Tamper+ ..... Tamper Input NO to ground
KEYPAD R +..... Keypad + (Red)
KEYPAD Y..... Keypad data (Yellow)
KEYPAD G ..... Keypad data (Green)
KEYPAD B -..... Keypad – (Black)
TRIG O/P 5..... Not used
TRIG O/P 4..... Trigger Output 4
TRIG O/P 3..... Trigger Output 3
TRIG O/P 2 ..... Trigger Output 2
TRIG O/P 1 ..... Trigger Output 1
ZONE 1..... Zone 1 input EOL resistor 2K7
C ..... Common
ZONE 2..... Zone 2 input EOL resistor 2K7
ZONE 3..... Zone 3 input EOL resistor 2K7
C ..... Common
ZONE 4 ..... Zone 4 input EOL resistor 2K7
ZONE 5 ..... Zone 5 input EOL resistor 2K7
C ..... Common
ZONE 6 ..... Zone 6 input EOL resistor 2K7
ZONE 7 ..... Zone 7 input EOL resistor 2K7
C ..... Common
ZONE 8 ..... Zone 8 input EOL resistor 2K7

**Note:** The siren output is supervised against an open loop, If no siren is to be used a 2K7 ohm resistor must be used to strap out the siren.
To monitor the siren for short circuit strap out the siren + and Tamper + with a 2k7 ohm resistor. The Tamper input must then be programmed as Tamper.



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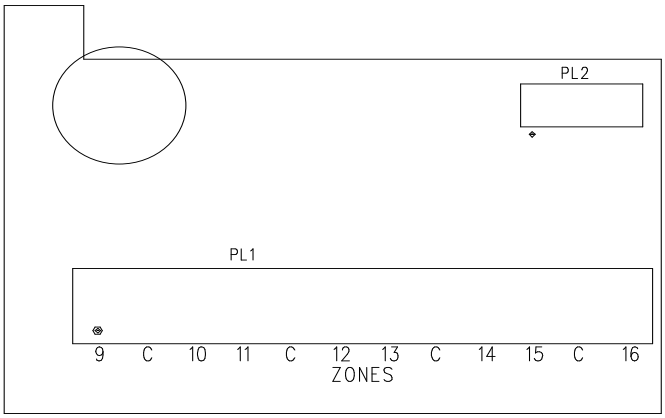
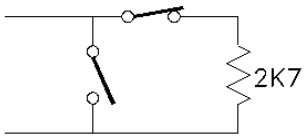
The siren tamper will cause an error to be displayed on all keypads across all partitions, Entering a code from any partition will clear the error message on all keypads but will not stop the error beep on the keypads in any other partitions. Press any key to stop the error beep.

# Expander board layout:



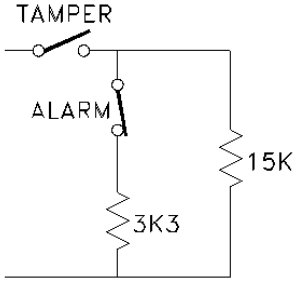

ZONE 9 ..... Zone 1 input EOL resistor 2K7
C ..... Common
ZONE 10 ..... Zone 2 input EOL resistor 2K7
ZONE 11 ..... Zone 3 input EOL resistor 2K7
C ..... Common
ZONE 12 ..... Zone 4 input EOL resistor 2K7
ZONE 13 ..... Zone 5 input EOL resistor 2K7
C ..... Common
ZONE 14 ..... Zone 6 input EOL resistor 2K7
ZONE 15 ..... Zone 7 input EOL resistor 2K7
C ..... Common
ZONE 16 ..... Zone 8 input EOL resistor 2K7

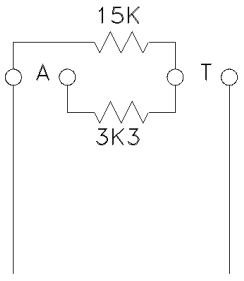
# Zone wiring - normal:




Normally open detectors are connected in parallel with the end of line resistor.
Normally closed detectors are connected in series with the end of line resistor.
A combination of N/O and N/C may be used.

# Zone wiring - dual end-of-line (Tamper)



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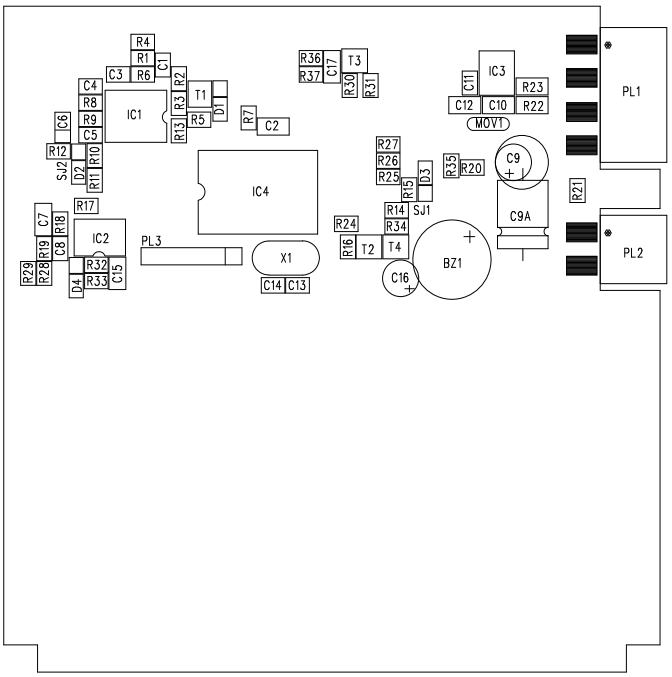
Only normally closed switches may be used in this configuration.
The normally closed tamper is connected in series with the feed or return line.

# Keypad wiring:

**4 wire bus line**




RED
BLACK
GREEN
YELLOW

O/P
I/P

***O/P INDICATION (remote LED)***
Off = system off.
On = system on.
Flashing = system alarmed.

***I/P INDICATION***
Each keypad has an additional zone input that may be wired in the normal single end of line configuration and programmed as any zone type except keyswitch.



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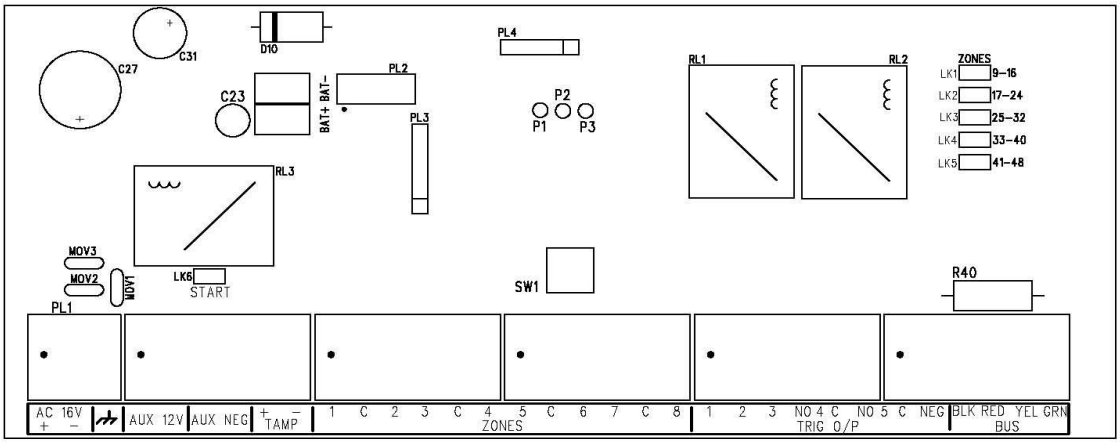
# Remote Expander Board – QE1004

The remote expander is an 8 zone input and 4 trigger output self contained unit with independent charger and battery.
Connection is via the 4-wire bus line and the zone and trigger numbers are link selected.




AC ..... AC input maximum 16.5V
(Earth) ..... This **must** be connected to building earth were possible, alternately to mains earth
AUX 12V ..... 12V + to peripherals i.e. IR detectors, beams, etc. (Fused at 1 amp)
AUX NEG..... Negative to peripherals
TAMP + ……...Tamper condition
TAMP - ……..Tamper neg
ZONE 1 ..... Zone 1 input EOL resistor 2K7
ZONE C ..... Common
ZONE 2 ..... Zone 2 input EOL resistor 2K7
ZONE 3 ..... Zone 3 input EOL resistor 2K7
ZONE C ..... Common
ZONE 4 ..... Zone 4 input EOL resistor 2K7
ZONE 5 ..... Zone 5 input EOL resistor 2K7
ZONE C ..... Common
ZONE 6 ..... Zone 6 input EOL resistor 2K7
ZONE 7 ..... Zone 7 input EOL resistor 2K7
ZONE C ..... Common
ZONE 8 ..... Zone 8 input EOL resistor 2K7
TRIG O/P 1 ..... Trigger output 1
TRIG O/P 2 ..... Trigger output 2
TRIG O/P 3 ..... Trigger output 3
TRIG O/P NO..... Trigger output 4 N/O
TRIG O/P 4 ..... Trigger output 4
TRIG O/P C ..... Trigger output 4 Common
TRIG O/P NO..... Trigger output 5 N/O
TRIG O/P 5 ..... Trigger output 5
TRIG O/P C ..... Trigger output 5 Common
TRIG O/P NEG .. Trigger output neg
BUS BLK ..... Keypad - (Black)
BUS RED..... Keypad + (Red)
BUS YEL..... Keypad data (Yellow)
BUS GRN ..... Keypad data (Green)

**ZONE LINKS (on right side of pcb)**
LK1…… 9 – 16 selects zones 9 – 16 and trigger outputs 9 - 12
LK2……17 – 24 selects zones 17 – 24 and trigger outputs 13 - 16
LK3……25 – 32 selects zones 25 – 32 and trigger outputs 17 - 20
LK4……33 – 40 selects zones 33 – 40 and trigger outputs 21 - 24
LK5……41 – 48 selects zones 41 – 48 and trigger outputs 25 - 28



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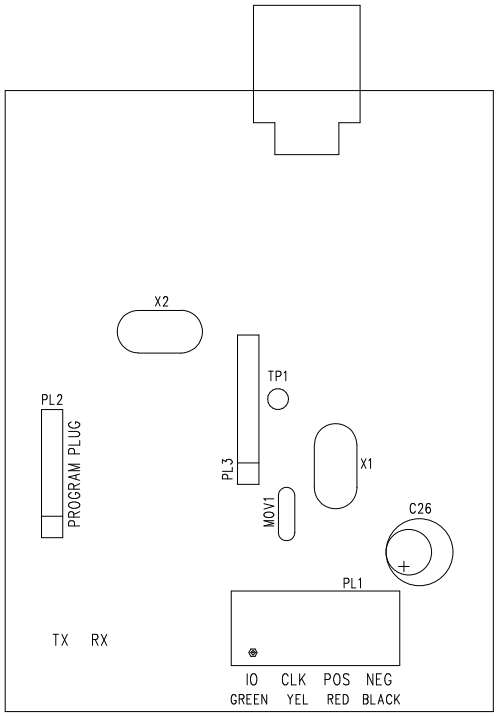
# BUS LINE CODEX RECEIVER.

By using the bus line receiver, the 505 –E has the capability of accepting up to 10 codex transmitters .
Each button could be assigned to either, opening /closing with encrypted user identification per partition, any keypad emergency condition or any trigger output.

Each transmitter is allocated in tandem with a user number and must be programmed from the partition in which it will operate, eg transmitter 1 assigned to user 1 will report as user 1.
A transmitter is not assignable across partitions for emergency conditions, although any button may be assigned to any trigger output or opening/closing per partition.

Transmitter button functions are programmed in questions 110 to 119.
**The transmitter frequency is taught to the system in end user programming function level 9, this allows the user to add or delete transmitters when necessary**.




Green……data bus line green wire

Yellow……..data bus line green wire

Red……data bus line red wire(+)

Black…….data bus line black wire(-)



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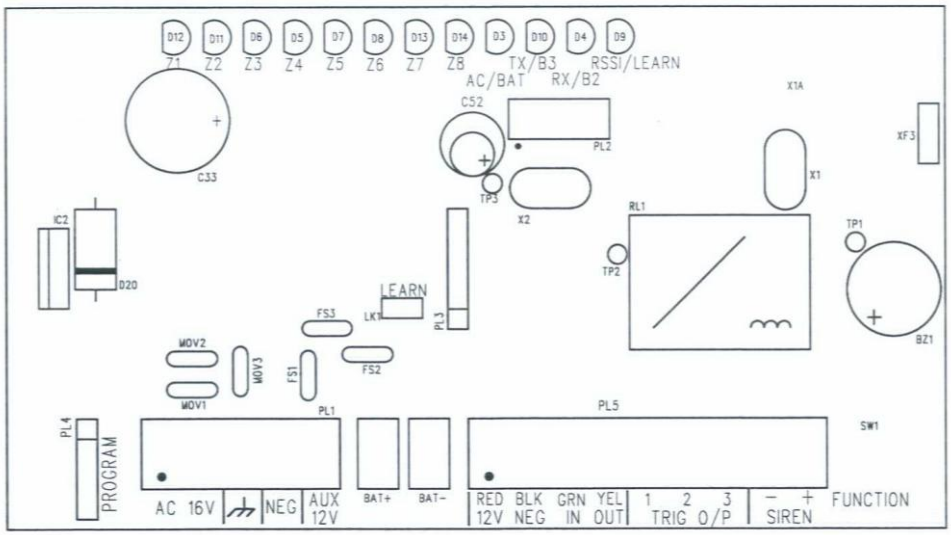
# QE920 WIRELESS EXPANSION MODULE

The QE920 is a wireless 8 zone bus expansion module for use on the PI HSC 505E Control Panel and allows the use of any of the Visonic range of wireless detectors, also incorporated is a codex receiver allowing for 8 codex remote transmitters.

The button functions of the codex remote transmitters are assigned in the panel programming questions 110 -117 (1 to 4 button remotes can be used).

Connection to the HSC 505E is via the standard 4 wire keypad bus line and can be mounted up to 100 meters from the control panel.

Figure 1




Red 12v……Keypad +
Black neg……Keypad –
Green in……...Keypad data (green)
Yellow out……Keypad data (yellow)
Trig O/p 1……..Detector supervision (detector has not tested for 1 hour)
Trig O/p 2……..Detector tamper
Trig O/p 3……..Detector low battery
Function button……Used to step through programming functions
Learn link……..Required for programming of functions

## Led indication

Led 1 to 8……Zone or remote 1 to 8
Ac/Bat on……..Display detector low battery with corresponding zone led
Tx on……...Codex remote programming
Rx on……...Wireless zone programming
Rssi on……Display signal strength (Zone leds 1 to 5 indicate strength)
Tx and Rx on……..Expander address and data activity

### *Note*

The Installer code on the PI HSC 505E is required before any programming on the QE 920 can be carried out.



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# Installation Instructions

1) Connect the QE920 to the HSC 505E bus line using an 8 core stranded cable (red/black/green/ yellow)
2) Connect the trigger outputs to the hardwired zones on the HCS 505E using a 2k7 ohm resistor (Figure 2)
3) Enable these hardwired zones that the triggers are connect to as 24 hour zones and name accordingly (Zone programming).
4) Enable the zones to be used on the HSC 505E according to the bus address assigned to the QE920 wireless expander (Zone programming)
5) Enable Codex remote button functions to be used (Question 110-117)
6) Assign a pin code and authority level to the corresponding users (see user manual adding user codes)

# Programming the QE920 Wireless Expander

**NB:** The following programming can only be carried out after the HSC 505E has been placed into programming mode.

### Select the expander bus address

1) Press the function button until the RX and TX leds light
2) Insert the “learn link” (Rx, Tx and Rssi leds flash)
3) Press the function button until the desired bus address is selected
   Led 1 = zones 9 – 16
   Led 2 = zones 17 – 24
   Led 3 = zones 25 – 32
4) When the led changes to a slow flash remove the “learn link”

# Programming wireless detectors

It is strongly recommended that the detectors are enrolled into the QE920 before the detectors are mounted. A flashing zone led indicates that the location is blank.

1) Assemble the detectors to be programmed. ***DO NOT*** put in the batteries
2) Put the battery into the detector to be learned only
3) Press the function button until the RX led lights
4) Insert the learn link (the RX and RSSI LEARN leds will flash)
5) Press the function button until zone 1 led lights (if the led lights continuously, press and hold the function button until the led flashes)
6) Trigger the wireless detector to be programmed into zone 1 (the QE920 will beep once and the led will burn continuously)
7) Remove the battery from the detector
8) Insert the battery for the next detector to be learned
9) Press the function button once, zone 2 led will flash
10) Trigger the wireless detector for zone 2, led will burn continuously
11) Remove the battery from the detector
12) Repeat from step 8 until all the detectors have been learned
13) Remove the learn link

### Remove a detector

1) Press the function button until the RX led lights
2) Insert the learn link (the RX and RSSI LEARN leds will flash)
3) Press the function button until the zone led lights for the detector to be removed
4) Press and hold the function button until the led flashes
5) Repeat steps 3 until all detectors to be removed are deleted
6) Remove the learn link



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**Note**- A wireless detector can only be programmed into a single location. If when attempting to program a detector the QE920 beeps and another zone led lights
This indicates that the detector that is being learned already exists in the zone being indicated by the led.

# Programming of the codex remotes

### 5 Button Codex transmitter button allocations:

| *Codex transmitter* | *505 E panel (question 110-119)* |
|---|---|
| Button 1 | Button 1 |
| Button 2 | Button 2 |
| Button 3 | Not used |
| Button 4 | Button 4 |
| Button 5 | Button 3 |

### Adding a remote

The codex remotes can be learned/deleted either on the QE920 wireless expander or by the user from the keypad, only if selected as zones 9-16 (see user manual adding / deleting remotes)

Adding remotes from the QE920 wireless expander

1) Press the function button until the TX led lights
2) Insert learn link (TX and RSSI LEARN leds flash)
3) Press the function button until led 1 lights (If the led lights continuously press and hold the function button until the led flashes)
4) Press a button on the codex transmitter (Led 1 burns continuously and the codex remote is assigned to user 1).
5) Press the function button once, led 2 lights
6) Repeat step 4 until all the codex remotes have been learned
7) Remove the learn link

### Delete a remote on the QE920

1) Press the function button until the TX led lights
2) Insert learn link (TX and RSSI LEARN leds flash)
3) Press the function button until led lights for the remote number to be deleted
4) Press and hold the function button until the led starts flashing
5) Repeat step 3 until all remotes to be deleted are removed
6) Remove learn link

**Power down the HSC 505E for 60 seconds and re-power for correct operation.**
**After a power up the QE920 wireless expander will be in a test mode for 15 minutes**

# Testing of the QE920 functions

Power down the HSC505E and re-power to enter Walk test mode on QE920

### Testing zones

After power-up on the QE920 the RX led will light

1) Trigger a wireless detector (The corresponding zone on the QE920 will light and the buzzer will beep, The 505E will indicated the zone as NOT READY)
2) Reset the wireless detector (The QE920 will beep and the corresponding zone led will extinguish, the 505E will indicate SYSTEM READY)
3) Repeat step 1 for the rest of the wireless detectors

### Checking Detector signal strength

1) Press the function button until the RSSI led lights
2) Trigger a wireless detector
3) The signal strength will be indicated by leds 1 to 5. The more leds lit the stronger the signal strength



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## Testing detector Tamper conditions

1) Press the function button until the RX led lights
2) Open a detector tamper
3) The zone led will flash and the tamper trigger will change state
4) Close the detector tamper
5) The zone led will go off and the tamper trigger returns to -12volts
6) Repeat step 2 for the rest of the detectors

## Testing or identifying a codex remote

1) Press the function button until TX led lights
2) Press a button on the Codex remote
3) Leds 1- 8 will light to indicate the remote number and the panel will respond with the function of the button
4) Repeat step 2 for any other remotes to be tested or identified

## Checking the bus identification

1) Press the function button until TX and RX leds light
2) Led 1-3 will flash indicating the bus address
3) Led 1 – Zones 9-16
   Led 2 – Zones 17-24
   Led 3 – Zones 25-32

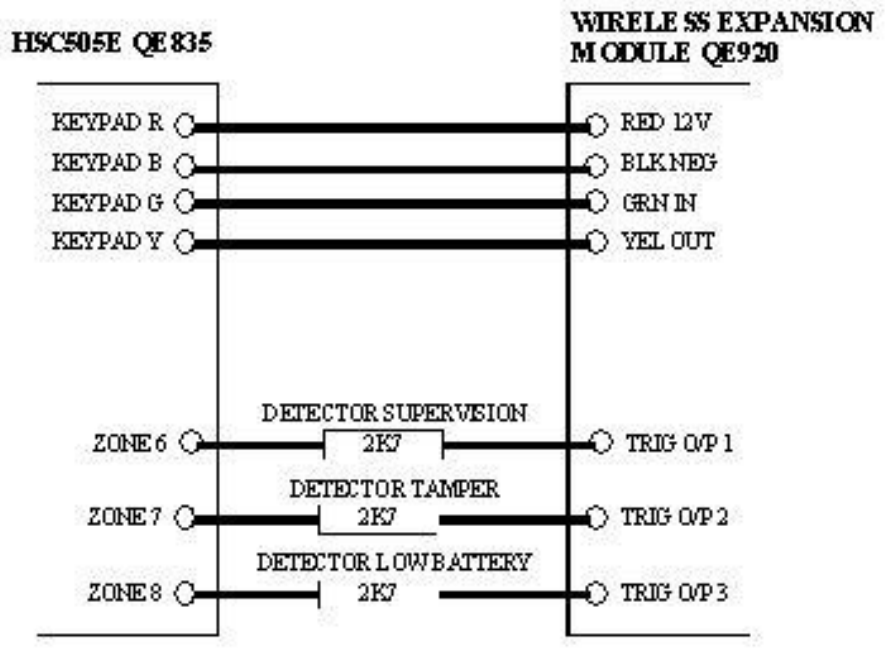
## Detector supervision (1 hour)

In the event that a detector fails 4 consecutive test signals, trigger 1 will switch to positive triggering the zone selected as supervision and the corresponding zone led will light. The HSC 505E will display the zone as faulty.
This zone will have to be by-passed to arm the system.

## Detector low Battery condition

In the event of a detector having a low battery, trigger 3 will switch to positive triggering the zone selected as low battery. The zone number will be indicated on the QE920 with the AC/BAT led.
Replace the battery and on the next transmission this condition will be reset.

Figure 2



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# First time installation:

1. Default the control panel by placing a jumper across LK1.
2. Apply power (either ac or dc volts) to the control panel.
3. After +/- 15 seconds, remove the jumper on LK1.
4. Remove power to control panel.
5. Connect the keypad/s.
6. Apply power to the control panel.
7. Address the keypad/s by entering programming mode 6 on each keypad (default installer code = 2580)
8. Remove power to control panel, +/- 15 seconds.
9. Re-apply power to the control panel.

**Note 1 :-** After addressing one or multiple keypads, the system must be powered down and re-powered to allow the keypads to be enrolled into the microprocessor.
If a new keypad is added at a later stage, the keypad must be enrolled and then updated by entering programming mode level 7, on the new keypad to update zone descriptors.

**Note 2 :-** After any programming is carried out on the control panel, a system power down must be carried out.

**Note 3 :-** To default a keypad to factory default
Remove all power.
Depress Panic, Fire, Medical and Prog keys simultaneously while re-applying power.

**Note 4 :-** Error message "**Not compatible upgrade panel** " is displayed when the panel software is below the keypad software and must be upgraded.

**Note 5 :-** Error message "**Not compatible upgrade keypad** " is displayed when the keypad software is below the panel software and must be upgraded.

**Note 6:-** **Defaulting**
When defaulting the control panel via the default jumper links on the panel all programming and user codes default but not the zone descriptors.

When defaulting via the keypad (installer level 3)all panel programming and zone descriptors default but not the user codes.

User codes only can be defaulted (Installer level 4).



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# Programming:

**Enter programming mode:**
When entering into the installer-programming mode, a unique installer code is required. This code as a default, is 2580 and is changeable in Question 00.
When entering into the programming mode, a programming level must be entered.
Press (Prog) key until single beep is heard.
Press the (*) key.
Enter installer code.
Enter desired programming level (0 TO 8).

**Programming levels:**

Level 0 = Get panel version.
This function requests the panel model and software version.

Level 1 = Keypad programming.
All system-programming functions are carried out in this level.

Level 2 = Walk test.
When in walk test mode, the system allows for all inputs to be walk tested. All triggered inputs remain in a memory condition on the keypad, until walk test is disabled.

Level 3 = Default Panel.
This level allows a complete system default back to factory default parameters.

Level 4 = Default user codes only.
Allows for all user codes only to be defaulted back to factory default. No system parameters will be affected.

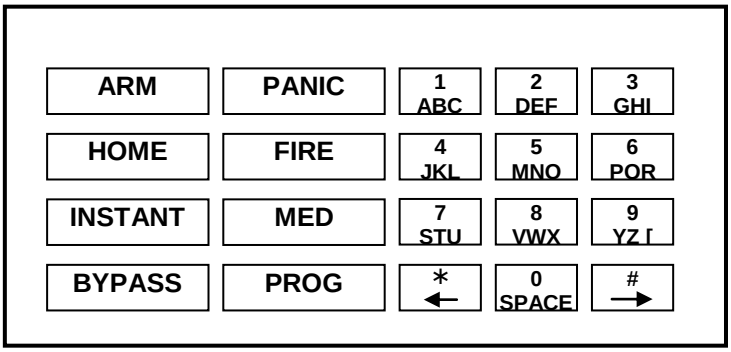
Level 5 = Edit zone descriptors.
Allows for zone and partition descriptors to be entered. A fixed word library is available, which may be changed. Standard cell phone editing is available, example key 1 = a, b, c, 1, refer e.g. on page 12.

.

Level 6 = Assign keypad address.
All keypads must be assigned a unique identification address before programming can be carried out.

Level 7 = Upload zone descriptors to a new keypad.
In the event of an additional keypad being added, the zone descriptors must be updated.

Level 8 = View historic log.




Instant key - Steps through the fixed library.
# key - Moves cursor to the right.
* key - Moves and deletes digits to the left.
Prog key - Save zone descriptor per zone and select next.
Bypass key - Select next zone



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# Zone Programming:

## Controlled Zones:

**Entry/exit -** This zone type is the primary entry and final exit point into the premises. Violation of an entry point when system armed will only start the entry timer. If a valid code is not entered within the entry time an alarm condition will occur.

**Follower -** A follower zone becomes an entry exit zone during a valid entry exit procedure. If the zone is violated outside an entry exit timer, the zone then acts as an instant zone.

**Instant audible -** This zone type when activated will cause an instant alarm condition with siren and communicator activation.

**Instant silent -** This zone type when activated will cause an instant alarm condition without any siren activation but with communicator.

**Keypad buzzer -** This zone type when activated will activate the keypad buzzers only, no siren or communicator.

## 24 Hour Zones: (armed or disarmed)

**24-hour audible -** This zone type when activated will cause an instant alarm condition with siren and communicator.

**24-hour silent -** This zone type when activated will cause an instant alarm condition without any siren but with communicator.

**24-hour fire -** This zone type when activated will cause an instant alarm condition with siren and communicator. The siren output to differentiate a fire condition will be pulsed.

**Keypad buzzer -** This zone type when activated will activate the keypad buzzers only, no siren or communicator.

**Keyswitch -** This zone when activated will cause the system to change its armed / disarmed state.
NOTE: only zones 16; input 1(zone 33); input 2 (zone 34); input 3 (zone35) may be selected as keyswitch zones to work across partitions 1 to 4.



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## QUESTION 1 to 34

**Location 1 = Zone type,** **Location 2 = Partition number,**
**Location 3 = Reporting code 1,** **Location 4 = Reporting code 2.**

### Location 1: *Zone type*

| | |
|---|---|
| 0 | Disabled |
| 1 | Entry/exit |
| 2 | Follower |
| 3 | Instant audible |
| 4 | Instant silent |
| 5 | Keypad buzzer |
| A | 24-hour audible |
| B | 24-hour silent |
| C | Fire |
| D | 24-hour keypad buzzer |
| E | Keyswitch |

### Location 2: *Partition assignment*

Assign zone to a partition 1 through 4. If a zone is programmed as a 5, the zone then becomes common to all partitions. This means that the zone will only arm when the last partition arms and will disarm with any partition disarming. Any not ready common zones will only be indicated on the last to arm partition.

| | |
|---|---|
| 1 | Partition 1 |
| 2 | Partition 2 |
| 3 | Partition 3 |
| 4 | Partition 4 |
| 5 | Common to all partitions |

### Location 3: *Reporting code digit 1*

Reporting code to identify the alarm condition when using either standard or express formats. This would also be the Point ID code.
To disable the reporting code, enter a value of “A” into the location.

### Location 4: *Reporting code digit 2*

Reporting code to identify the zone number when using standard or express formats. lor contact ID this location becomes a 0.

### Zones:

| | |
|---|---|
| 1 to 8 | 2k7 EOL resistor programmable zones on the control panel. |
| 9 to 16 | 2k7 EOL resistor programmable zones on the onboard expander. |
| 17 to 24 | Keypad or expander zones. Each keypad installed provides 1 additional 2k7 input zone and 1 trigger output.<br>NOTE: - keypad zones are enabled in question 60 - L3 & L4. |
| 25 to 32 | 2k7 EOL zones on an 8-zone bus expander (future expansion). |
| 33 | Panic input2k7 ohm EOL resistor . Programmable only as 24-hour audible;<br>24-hour silent or keyswitch. |
| 34 | Tamper input . Programmable only as 24-hour audible;<br>24-hour silent or keyswitch. |



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# Keypad Partition Assignment:

Each keypad on the system must be assigned an ID number. 1 through 8 and then assigned to a specific partition. A partition may have multiple keypads assigned to it. Keypads may only be assigned to one partition.
Common area zones, if not ready will only display on the last to arm partition. An alarm condition will be displayed on the first partition to disarm.

## QUESTION 36

**Location 1 = Keypad 1,** **Location 2 = Keypad 2,**
**Location 3 = Keypad 3,** **Location 4 = Keypad 4.**

| | |
|---|---|
| 1 | Partition 1 |
| 2 | Partition 2 |
| 3 | Partition 3 |
| 4 | Partition 4 |

## QUESTION 37

**Location 1 = Keypad 5,** **Location 2 = Keypad 6,**
**Location 3 = Keypad 7,** **Location 4 = Keypad 8**

| | |
|---|---|
| 1 | Partition 1 |
| 2 | Partition 2 |
| 3 | Partition 3 |
| 4 | Partition 4 |



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# Home Zone Enabled:

## QUESTION 38 AND 39

Any zone assigned as a home zone will automatically bypass when arming in the home mode.

## QUESTION 38

**Location 1 = Home zones 1 to 4, Location 2 = Home zones 5 to 8,**
**Location 3 = Home zones 9 to 12, Location 4 = Home zones 13 to 16.**

Location 1

| Value | Home Zone 1 | Home Zone 2 | Home Zone 3 | Home Zone 4 |
|---|---|---|---|---|
| 0 | | | | |
| 1 | ✓ | | | |
| 2 | | ✓ | | |
| 3 | ✓ | ✓ | | |
| 4 | | | ✓ | |
| 5 | ✓ | | ✓ | |
| 6 | | ✓ | ✓ | |
| 7 | ✓ | ✓ | ✓ | |
| 8 | | | | ✓ |
| 9 | ✓ | | | ✓ |
| A | | ✓ | | ✓ |
| B | ✓ | ✓ | | ✓ |
| C | | | ✓ | ✓ |
| D | ✓ | | ✓ | ✓ |
| E | | ✓ | ✓ | ✓ |
| F | ✓ | ✓ | ✓ | ✓ |

Location 2

| Value | Home Zone 5 | Home Zone 6 | Home Zone 7 | Home Zone 8 |
|---|---|---|---|---|
| 0 | | | | |
| 1 | ✓ | | | |
| 2 | | ✓ | | |
| 3 | ✓ | ✓ | | |
| 4 | | | ✓ | |
| 5 | ✓ | | ✓ | |
| 6 | | ✓ | ✓ | |
| 7 | ✓ | ✓ | ✓ | |
| 8 | | | | ✓ |
| 9 | ✓ | | | ✓ |
| A | | ✓ | | ✓ |
| B | ✓ | ✓ | | ✓ |
| C | | | ✓ | ✓ |
| D | ✓ | | ✓ | ✓ |
| E | | ✓ | ✓ | ✓ |
| F | ✓ | ✓ | ✓ | ✓ |

Location 3

| Value | Home Zone 9 | Home Zone 10 | Home Zone 11 | Home Zone 12 |
|---|---|---|---|---|
| 0 | | | | |
| 1 | ✓ | | | |
| 2 | | ✓ | | |
| 3 | ✓ | ✓ | | |
| 4 | | | ✓ | |
| 5 | ✓ | | ✓ | |
| 6 | | ✓ | ✓ | |
| 7 | ✓ | ✓ | ✓ | |
| 8 | | | | ✓ |
| 9 | ✓ | | | ✓ |
| A | | ✓ | | ✓ |
| B | ✓ | ✓ | | ✓ |
| C | | | ✓ | ✓ |
| D | ✓ | | ✓ | ✓ |
| E | | ✓ | ✓ | ✓ |
| F | ✓ | ✓ | ✓ | ✓ |

Location 4

| Value | Home Zone 13 | Home Zone 14 | Home Zone 15 | Home Zone 16 |
|---|---|---|---|---|
| 0 | | | | |
| 1 | ✓ | | | |
| 2 | | ✓ | | |
| 3 | ✓ | ✓ | | |
| 4 | | | ✓ | |
| 5 | ✓ | | ✓ | |
| 6 | | ✓ | ✓ | |
| 7 | ✓ | ✓ | ✓ | |
| 8 | | | | ✓ |
| 9 | ✓ | | | ✓ |
| A | | ✓ | | ✓ |
| B | ✓ | ✓ | | ✓ |
| C | | | ✓ | ✓ |
| D | ✓ | | ✓ | ✓ |
| E | | ✓ | ✓ | ✓ |
| F | ✓ | ✓ | ✓ | ✓ |



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# Home Zone Enable:

## QUESTION 39

**Location 1 = Home zones 17 to 20, Location 2 = Home zones 21 to 24,**
**Location 3 = Home zones 25 to 28, Location 4 = Home zones 29 to 32.**

Location 1

| Value | Home Zone 17 | Home Zone 18 | Home Zone 19 | Home Zone 20 |
|---|---|---|---|---|
| 0 | | | | |
| 1 | ✓ | | | |
| 2 | | ✓ | | |
| 3 | ✓ | ✓ | | |
| 4 | | | ✓ | |
| 5 | ✓ | | ✓ | |
| 6 | | ✓ | ✓ | |
| 7 | ✓ | ✓ | ✓ | |
| 8 | | | | ✓ |
| 9 | ✓ | | | ✓ |
| A | | ✓ | | ✓ |
| B | ✓ | ✓ | | ✓ |
| C | | | ✓ | ✓ |
| D | ✓ | | ✓ | ✓ |
| E | | ✓ | ✓ | ✓ |
| F | ✓ | ✓ | ✓ | ✓ |

Location 2

| Value | Home Zone 21 | Home Zone 22 | Home Zone 23 | Home Zone 24 |
|---|---|---|---|---|
| 0 | | | | |
| 1 | ✓ | | | |
| 2 | | ✓ | | |
| 3 | ✓ | ✓ | | |
| 4 | | | ✓ | |
| 5 | ✓ | | ✓ | |
| 6 | | ✓ | ✓ | |
| 7 | ✓ | ✓ | ✓ | |
| 8 | | | | ✓ |
| 9 | ✓ | | | ✓ |
| A | | ✓ | | ✓ |
| B | ✓ | ✓ | | ✓ |
| C | | | ✓ | ✓ |
| D | ✓ | | ✓ | ✓ |
| E | | ✓ | ✓ | ✓ |
| F | ✓ | ✓ | ✓ | ✓ |

Location 3

| Value | Home Zone 25 | Home Zone 26 | Home Zone 27 | Home Zone 28 |
|---|---|---|---|---|
| 0 | | | | |
| 1 | ✓ | | | |
| 2 | | ✓ | | |
| 3 | ✓ | ✓ | | |
| 4 | | | ✓ | |
| 5 | ✓ | | ✓ | |
| 6 | | ✓ | ✓ | |
| 7 | ✓ | ✓ | ✓ | |
| 8 | | | | ✓ |
| 9 | ✓ | | | ✓ |
| A | | ✓ | | ✓ |
| B | ✓ | ✓ | | ✓ |
| C | | | ✓ | ✓ |
| D | ✓ | | ✓ | ✓ |
| E | | ✓ | ✓ | ✓ |
| F | ✓ | ✓ | ✓ | ✓ |

Location 4

| Value | Home Zone 29 | Home Zone 30 | Home Zone 31 | Home Zone 32 |
|---|---|---|---|---|
| 0 | | | | |
| 1 | ✓ | | | |
| 2 | | ✓ | | |
| 3 | ✓ | ✓ | | |
| 4 | | | ✓ | |
| 5 | ✓ | | ✓ | |
| 6 | | ✓ | ✓ | |
| 7 | ✓ | ✓ | ✓ | |
| 8 | | | | ✓ |
| 9 | ✓ | | | ✓ |
| A | | ✓ | | ✓ |
| B | ✓ | ✓ | | ✓ |
| C | | | ✓ | ✓ |
| D | ✓ | | ✓ | ✓ |
| E | | ✓ | ✓ | ✓ |
| F | ✓ | ✓ | ✓ | ✓ |



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# Zone Tamper Enable:

## QUESTION 40 Zones 1 to 16 , (Zones 17 to 32 are question number 50)

**Location 1 = Tamper zones 1 to 4, Location 2 = Tamper zones 5 to 8,**
**Location 3 = Tamper zones 9 to 12, Location 4 = Tamper zones 13 to 16.**

Tamper is only selectable on zones 1 to 16. When making use of the tamper facility, the zone wiring differs from the normal EOL wiring, to a dual EOL configuration, using a 3k3 ohm in series with the alarm contacts and a 15k in parallel with the alarm contacts and 3k3.
The normally closed tamper contact is wired in series with this configuration.

**Tampers may not be selected on common zones.** If tampers are required on common zone then a separate zone must be utilized, and programmed as a 24-hour zone.

Location 1

| Value | Tamper Zone 1 | Tamper Zone 2 | Tamper Zone 3 | Tamper Zone 4 |
|---|---|---|---|---|
| 0 | | | | |
| 1 | ✓ | | | |
| 2 | | ✓ | | |
| 3 | ✓ | ✓ | | |
| 4 | | | ✓ | |
| 5 | ✓ | | ✓ | |
| 6 | | ✓ | ✓ | |
| 7 | ✓ | ✓ | ✓ | |
| 8 | | | | ✓ |
| 9 | ✓ | | | ✓ |
| A | | ✓ | | ✓ |
| B | ✓ | ✓ | | ✓ |
| C | | | ✓ | ✓ |
| D | ✓ | | ✓ | ✓ |
| E | | ✓ | ✓ | ✓ |
| F | ✓ | ✓ | ✓ | ✓ |

Location 2

| Value | Tamper Zone 5 | Tamper Zone 6 | Tamper Zone 7 | Tamper Zone 8 |
|---|---|---|---|---|
| 0 | | | | |
| 1 | ✓ | | | |
| 2 | | ✓ | | |
| 3 | ✓ | ✓ | | |
| 4 | | | ✓ | |
| 5 | ✓ | | ✓ | |
| 6 | | ✓ | ✓ | |
| 7 | ✓ | ✓ | ✓ | |
| 8 | | | | ✓ |
| 9 | ✓ | | | ✓ |
| A | | ✓ | | ✓ |
| B | ✓ | ✓ | | ✓ |
| C | | | ✓ | ✓ |
| D | ✓ | | ✓ | ✓ |
| E | | ✓ | ✓ | ✓ |
| F | ✓ | ✓ | ✓ | ✓ |

Location 3

| Value | Tamper Zone 9 | Tamper Zone 10 | Tamper Zone 11 | Tamper Zone 12 |
|---|---|---|---|---|
| 0 | | | | |
| 1 | ✓ | | | |
| 2 | | ✓ | | |
| 3 | ✓ | ✓ | | |
| 4 | | | ✓ | |
| 5 | ✓ | | ✓ | |
| 6 | | ✓ | ✓ | |
| 7 | ✓ | ✓ | ✓ | |
| 8 | | | | ✓ |
| 9 | ✓ | | | ✓ |
| A | | ✓ | | ✓ |
| B | ✓ | ✓ | | ✓ |
| C | | | ✓ | ✓ |
| D | ✓ | | ✓ | ✓ |
| E | | ✓ | ✓ | ✓ |
| F | ✓ | ✓ | ✓ | ✓ |

Location 4

| Value | Tamper Zone 13 | Tamper Zone 14 | Tamper Zone 15 | Tamper Zone 16 |
|---|---|---|---|---|
| 0 | | | | |
| 1 | ✓ | | | |
| 2 | | ✓ | | |
| 3 | ✓ | ✓ | | |
| 4 | | | ✓ | |
| 5 | ✓ | | ✓ | |
| 6 | | ✓ | ✓ | |
| 7 | ✓ | ✓ | ✓ | |
| 8 | | | | ✓ |
| 9 | ✓ | | | ✓ |
| A | | ✓ | | ✓ |
| B | ✓ | ✓ | | ✓ |
| C | | | ✓ | ✓ |
| D | ✓ | | ✓ | ✓ |
| E | | ✓ | ✓ | ✓ |
| F | ✓ | ✓ | ✓ | ✓ |



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# Bypass Enable:

## QUESTION 41

Bypass enable zones 1 to 16.

**Location 1 = Bypass zones 1 to 4, Location 2 = Bypass zones 5 to 8,**
**Location 3 = Bypass zones 9 to 12, Location 4 = Bypass zones 13 to 16.**

Location 1

| Value | Bypass Zone 1 | Bypass Zone 2 | Bypass Zone 3 | Bypass Zone 4 |
|---|---|---|---|---|
| 0 | ✓ | ✓ | ✓ | ✓ |
| 1 | | ✓ | ✓ | ✓ |
| 2 | ✓ | | ✓ | ✓ |
| 3 | | | ✓ | ✓ |
| 4 | ✓ | ✓ | | ✓ |
| 5 | | ✓ | | ✓ |
| 6 | ✓ | | | ✓ |
| 7 | | | | ✓ |
| 8 | ✓ | ✓ | ✓ | |
| 9 | | ✓ | ✓ | |
| A | ✓ | | ✓ | |
| B | | | ✓ | |
| C | ✓ | ✓ | | |
| D | | ✓ | | |
| E | ✓ | | | |
| F | | | | |

Location 2

| Value | Bypass Zone 5 | Bypass Zone 6 | Bypass Zone 7 | Bypass Zone 8 |
|---|---|---|---|---|
| 0 | ✓ | ✓ | ✓ | ✓ |
| 1 | | ✓ | ✓ | ✓ |
| 2 | ✓ | | ✓ | ✓ |
| 3 | | | ✓ | ✓ |
| 4 | ✓ | ✓ | | ✓ |
| 5 | | ✓ | | ✓ |
| 6 | ✓ | | | ✓ |
| 7 | | | | ✓ |
| 8 | ✓ | ✓ | ✓ | |
| 9 | | ✓ | ✓ | |
| A | ✓ | | ✓ | |
| B | | | ✓ | |
| C | ✓ | ✓ | | |
| D | | ✓ | | |
| E | ✓ | | | |
| F | | | | |

Location 3

| Value | Bypass Zone 9 | Bypass Zone 10 | Bypass Zone 11 | Bypass Zone 12 |
|---|---|---|---|---|
| 0 | ✓ | ✓ | ✓ | ✓ |
| 1 | | ✓ | ✓ | ✓ |
| 2 | ✓ | | ✓ | ✓ |
| 3 | | | ✓ | ✓ |
| 4 | ✓ | ✓ | | ✓ |
| 5 | | ✓ | | ✓ |
| 6 | ✓ | | | ✓ |
| 7 | | | | ✓ |
| 8 | ✓ | ✓ | ✓ | |
| 9 | | ✓ | ✓ | |
| A | ✓ | | ✓ | |
| B | | | ✓ | |
| C | ✓ | ✓ | | |
| D | | ✓ | | |
| E | ✓ | | | |
| F | | | | |

Location 4

| Value | Bypass Zone 13 | Bypass Zone 14 | Bypass Zone 15 | Bypass Zone 16 |
|---|---|---|---|---|
| 0 | ✓ | ✓ | ✓ | ✓ |
| 1 | | ✓ | ✓ | ✓ |
| 2 | ✓ | | ✓ | ✓ |
| 3 | | | ✓ | ✓ |
| 4 | ✓ | ✓ | | ✓ |
| 5 | | ✓ | | ✓ |
| 6 | ✓ | | | ✓ |
| 7 | | | | ✓ |
| 8 | ✓ | ✓ | ✓ | |
| 9 | | ✓ | ✓ | |
| A | ✓ | | ✓ | |
| B | | | ✓ | |
| C | ✓ | ✓ | | |
| D | | ✓ | | |
| E | ✓ | | | |
| F | | | | |



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# Bypass Enable:

## QUESTION 42

Bypass enable zones 17 to 32.

**Location 1 = Bypass zones 17 to 20, Location 2 = Bypass zones 21 to 24,**
**Location 3 = Bypass zones 25 to 28, Location 4 = Bypass zones 29 to 32.**

Location 1

| Value | Bypass Zone 17 | Bypass Zone 18 | Bypass Zone 19 | Bypass Zone 20 |
|---|---|---|---|---|
| 0 | ✓ | ✓ | ✓ | ✓ |
| 1 | | ✓ | ✓ | ✓ |
| 2 | ✓ | | ✓ | ✓ |
| 3 | | | ✓ | ✓ |
| 4 | ✓ | ✓ | | ✓ |
| 5 | | ✓ | | ✓ |
| 6 | ✓ | | | ✓ |
| 7 | | | | ✓ |
| 8 | ✓ | ✓ | ✓ | |
| 9 | | ✓ | ✓ | |
| A | ✓ | | ✓ | |
| B | | | ✓ | |
| C | ✓ | ✓ | | |
| D | | ✓ | | |
| E | ✓ | | | |
| F | | | | |

Location 2

| Value | Bypass Zone 21 | Bypass Zone 22 | Bypass Zone 23 | Bypass Zone 24 |
|---|---|---|---|---|
| 0 | ✓ | ✓ | ✓ | ✓ |
| 1 | | ✓ | ✓ | ✓ |
| 2 | ✓ | | ✓ | ✓ |
| 3 | | | ✓ | ✓ |
| 4 | ✓ | ✓ | | ✓ |
| 5 | | ✓ | | ✓ |
| 6 | ✓ | | | ✓ |
| 7 | | | | ✓ |
| 8 | ✓ | ✓ | ✓ | |
| 9 | | ✓ | ✓ | |
| A | ✓ | | ✓ | |
| B | | | ✓ | |
| C | ✓ | ✓ | | |
| D | | ✓ | | |
| E | ✓ | | | |
| F | | | | |

Location 3

| Value | Bypass Zone 25 | Bypass Zone 26 | Bypass Zone 27 | Bypass Zone 28 |
|---|---|---|---|---|
| 0 | ✓ | ✓ | ✓ | ✓ |
| 1 | | ✓ | ✓ | ✓ |
| 2 | ✓ | | ✓ | ✓ |
| 3 | | | ✓ | ✓ |
| 4 | ✓ | ✓ | | ✓ |
| 5 | | ✓ | | ✓ |
| 6 | ✓ | | | ✓ |
| 7 | | | | ✓ |
| 8 | ✓ | ✓ | ✓ | |
| 9 | | ✓ | ✓ | |
| A | ✓ | | ✓ | |
| B | | | ✓ | |
| C | ✓ | ✓ | | |
| D | | ✓ | | |
| E | ✓ | | | |
| F | | | | |

Location 4

| Value | Bypass Zone 29 | Bypass Zone 30 | Bypass Zone 31 | Bypass Zone 32 |
|---|---|---|---|---|
| 0 | ✓ | ✓ | ✓ | ✓ |
| 1 | | ✓ | ✓ | ✓ |
| 2 | ✓ | | ✓ | ✓ |
| 3 | | | ✓ | ✓ |
| 4 | ✓ | ✓ | | ✓ |
| 5 | | ✓ | | ✓ |
| 6 | ✓ | | | ✓ |
| 7 | | | | ✓ |
| 8 | ✓ | ✓ | ✓ | |
| 9 | | ✓ | ✓ | |
| A | ✓ | | ✓ | |
| B | | | ✓ | |
| C | ✓ | ✓ | | |
| D | | ✓ | | |
| E | ✓ | | | |
| F | | | | |



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# Auto Arm Modes:

## QUESTION 43

**Location 1 = Auto arm mode for partition 1, Location 2 = Auto arm mode for partition 2,**
**Location 3 = Auto arm mode for partition 3, Location 4 = Auto arm mode for partition 4.**

| | |
|---|---|
| 0 | Auto-arm away |
| 1 | Auto-arm home |
| 2 | Auto-arm home instant |

# Auto Arm Time:

## QUESTION 44

AUTO ARM TIME PARTITION 1:
Auto arm time is programmed in the 24-hour mode.

**Location 1 = Hours x 10, Location 2 = Hours x 1,**
**Location 3 = Minutes x 10, Location 4 = Minutes x 1.**

## QUESTION 45

AUTO ARM TIME PARTITION 2:
Auto arm time is programmed in the 24-hour mode.

**Location 1 = Hours x 10, Location 2 = Hours x 1,**
**Location 3 = Minutes x 10, Location 4 = Minutes x 1.**

## QUESTION 46

AUTO ARM TIME PARTITION 3:
Auto arm time is programmed in the 24-hour mode.

**Location 1 = Hours x 10, Location 2 = Hours x 1,**
**Location 3 = Minutes x 10, Location 4 = Minutes x 1.**

## QUESTION 47

AUTO ARM TIME PARTITION 4:
Auto arm time is programmed in the 24-hour mode.

**Location 1 = Hours x 10, Location 2 = Hours x 1,**
**Location 3 = Minutes x 10, Location 4 = Minutes x 1.**



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# Timers:

## ENTRY

## QUESTION 48

**Location 1 = Entry delay partition 1, Location 2 = Entry delay partition 2,**
**Location 3 = Entry delay partition 3, Location 4 = Entry delay partition 4.**

## EXIT

## QUESTION 49

**Location 1 = Exit delay partition 1, Location 2 = Exit delay partition 2,**
**Location 3 = Exit delay partition 3, Location 4 = Exit delay partition 4.**

**Timer values**

| Value | Delay times |
|---|---|
| 0 | 2 Seconds |
| 1 | 4 Seconds |
| 2 | 6 Seconds |
| 3 | 10 Seconds |
| 4 | 20 Seconds |
| 5 | 30 Seconds |
| 6 | 40 Seconds |
| 7 | 50 Seconds |
| 8 | 1 Minute |
| 9 | 1.5 Minutes |
| A | 2 Minutes |
| B | 2.5 Minutes |
| C | 3 Minutes |
| D | 3.5 Minutes |
| E | 4 Minutes |
| F | 4.25 Minutes |



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## QUESTION 50

Zone Tamper 17 to 32

**Location 1 = Zones 17 to 20,** **Location 2 = Zones 21 to 24,**
**Location 3 = zones 25 to 28,** **Location 4 = Zones 26 to 32.**

Location 1

| Value | Tamper Zone 17 | Tamper Zone 18 | Tamper Zone 19 | Tamper Zone 20 |
|---|---|---|---|---|
| 0 | | | | |
| 1 | ✓ | | | |
| 2 | | ✓ | | |
| 3 | ✓ | ✓ | | |
| 4 | | | ✓ | |
| 5 | ✓ | | ✓ | |
| 6 | | ✓ | ✓ | |
| 7 | ✓ | ✓ | ✓ | |
| 8 | | | | ✓ |
| 9 | ✓ | | | ✓ |
| A | | ✓ | | ✓ |
| B | ✓ | ✓ | | ✓ |
| C | | | ✓ | ✓ |
| D | ✓ | | ✓ | ✓ |
| E | | ✓ | ✓ | ✓ |
| F | ✓ | ✓ | ✓ | ✓ |

Location 2

| Value | Tamper Zone 21 | Tamper Zone 22 | Tamper Zone 23 | Tamper Zone 24 |
|---|---|---|---|---|
| 0 | | | | |
| 1 | ✓ | | | |
| 2 | | ✓ | | |
| 3 | ✓ | ✓ | | |
| 4 | | | ✓ | |
| 5 | ✓ | | ✓ | |
| 6 | | ✓ | ✓ | |
| 7 | ✓ | ✓ | ✓ | |
| 8 | | | | ✓ |
| 9 | ✓ | | | ✓ |
| A | | ✓ | | ✓ |
| B | ✓ | ✓ | | ✓ |
| C | | | ✓ | ✓ |
| D | ✓ | | ✓ | ✓ |
| E | | ✓ | ✓ | ✓ |
| F | ✓ | ✓ | ✓ | ✓ |

Location 3

| Value | Tamper Zone 25 | Tamper Zone 26 | Tamper Zone 27 | Tamper Zone 28 |
|---|---|---|---|---|
| 0 | | | | |
| 1 | ✓ | | | |
| 2 | | ✓ | | |
| 3 | ✓ | ✓ | | |
| 4 | | | ✓ | |
| 5 | ✓ | | ✓ | |
| 6 | | ✓ | ✓ | |
| 7 | ✓ | ✓ | ✓ | |
| 8 | | | | ✓ |
| 9 | ✓ | | | ✓ |
| A | | ✓ | | ✓ |
| B | ✓ | ✓ | | ✓ |
| C | | | ✓ | ✓ |
| D | ✓ | | ✓ | ✓ |
| E | | ✓ | ✓ | ✓ |
| F | ✓ | ✓ | ✓ | ✓ |

Location 4

| Value | Tamper Zone 29 | Tamper Zone 30 | Tamper Zone 31 | Tamper Zone 32 |
|---|---|---|---|---|
| 0 | | | | |
| 1 | ✓ | | | |
| 2 | | ✓ | | |
| 3 | ✓ | ✓ | | |
| 4 | | | ✓ | |
| 5 | ✓ | | ✓ | |
| 6 | | ✓ | ✓ | |
| 7 | ✓ | ✓ | ✓ | |
| 8 | | | | ✓ |
| 9 | ✓ | | | ✓ |
| A | | ✓ | | ✓ |
| B | ✓ | ✓ | | ✓ |
| C | | | ✓ | ✓ |
| D | ✓ | | ✓ | ✓ |
| E | | ✓ | ✓ | ✓ |
| F | ✓ | ✓ | ✓ | ✓ |

## QUESTION 51

**Location 1 = Reserved,** **Location 2 = Reserved,**
**Location 3 = Reserved,** **Location 4 = Reserved.**



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## QUESTION 52

**Location 1 = Auto test delay,** **Location 2 = Communicator delay,**
**Location 3 = Ac fail delay,** **Location 4 = Siren timeout.**

### Location 1: *Auto test delay*

Sets the delay between auto-tests. Disable auto-testing by setting the report code to “AA” in Question67 - L1&L2.

| Value | Delay times |
|---|---|
| 0 | 1 Day |
| 1 | 2 Days |
| 2 | 3 Days |
| 3 | 4 Days |
| 4 | 5 Days |
| 5 | 6 Days |
| 6 | 7 Days |
| 7 | 8 Days |
| 8 | 9 Days |
| 9 | 10 Days |
| A | 11 Days |
| B | 12 Days |
| C | 13 Days |
| D | 14 Days |
| E | 15 Days |
| F | 16 Days |

### Location 2: *Communication delay.*

Sets the delay time between an event and the reporting communications-taking place.

| Value | Delay times |
|---|---|
| 0 | No delay |
| 1 | 1 Seconds |
| 2 | 2 Seconds |
| 3 | 3 Seconds |
| 4 | 4 Seconds |
| 5 | 5 Seconds |
| 6 | 6 Seconds |
| 7 | 7 Seconds |
| 8 | 8 Seconds |
| 9 | 9 Seconds |
| A | 10 Seconds |
| B | 11 Seconds |
| C | 12 Seconds |
| D | 13 Seconds |
| E | 14 Seconds |
| F | 15 Seconds |



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## QUESTION 52

### Location 3: *AC fail delay*

Sets the delay time between a mains AC fail or restore and the event being triggered.

| Value | Delay times |
|---|---|
| 0 | 1 Minute |
| 1 | 5 Minutes |
| 2 | 10 Minutes |
| 3 | 15 Minutes |
| 4 | 20 Minutes |
| 5 | 25 Minutes |
| 6 | 30 Minutes |
| 7 | 35 Minutes |
| 8 | 40 Minutes |
| 9 | 45 Minutes |
| A | 50 Minutes |
| B | 55 Minutes |
| C | 60 Minutes |
| D | 65 Minutes |
| E | 70 Minutes |
| F | 75 Minutes |

### Location 4: *Siren time out*

| Value | Delay times |
|---|---|
| 0 | 2 Seconds |
| 1 | 4 Seconds |
| 2 | 6 Seconds |
| 3 | 10 Seconds |
| 4 | 20 Seconds |
| 5 | 30 Seconds |
| 6 | 40 Seconds |
| 7 | 50 Seconds |
| 8 | 1 Minute |
| 9 | 1.5 Minutes |
| A | 2 Minutes |
| B | 2.5 Minutes |
| C | 3 Minutes |
| D | 3.5 Minutes |
| E | 4 Minutes |
| F | 4.25 Minutes |



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# System Functions:

## QUICK COMMAND FUNCTIONS

## QUESTION 53

**Location 1 = Fast arm enable,** **Location 2 = Fast bypass enable,**
**Location 3 = Arm when faulted enable,** **Location 4 = Siren alert.**

### Location 1: *Fast arm enable*

Allows arming in any mode without using a user code. A code is necessary to disarm.

| Value | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
|---|---|---|---|---|
| 0 | | | | |
| 1 | ✓ | | | |
| 2 | | ✓ | | |
| 3 | ✓ | ✓ | | |
| 4 | | | ✓ | |
| 5 | ✓ | | ✓ | |
| 6 | | ✓ | ✓ | |
| 7 | ✓ | ✓ | ✓ | |
| 8 | | | | ✓ |
| 9 | ✓ | | | ✓ |
| A | | ✓ | | ✓ |
| B | ✓ | ✓ | | ✓ |
| C | | | ✓ | ✓ |
| D | ✓ | | ✓ | ✓ |
| E | | ✓ | ✓ | ✓ |
| F | ✓ | ✓ | ✓ | ✓ |

### Location 2: *Fast bypass*

Allows bypassing without the use of a user code. Bypass automatically falls away when the partition is disarmed.

| Value | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
|---|---|---|---|---|
| 0 | | | | |
| 1 | ✓ | | | |
| 2 | | ✓ | | |
| 3 | ✓ | ✓ | | |
| 4 | | | ✓ | |
| 5 | ✓ | | ✓ | |
| 6 | | ✓ | ✓ | |
| 7 | ✓ | ✓ | ✓ | |
| 8 | | | | ✓ |
| 9 | ✓ | | | ✓ |
| A | | ✓ | | ✓ |
| B | ✓ | ✓ | | ✓ |
| C | | | ✓ | ✓ |
| D | ✓ | | ✓ | ✓ |
| E | | ✓ | ✓ | ✓ |
| F | ✓ | ✓ | ✓ | ✓ |



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## QUESTION 53

### Location 3: *Arm when faulted*

Allows arming when an entry exit or follower zone is violated. this zone must be closed before the exit timer times out or an alarm condition will occur.

| Value | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
|---|---|---|---|---|
| 0 | | | | |
| 1 | ✓ | | | |
| 2 | | ✓ | | |
| 3 | ✓ | ✓ | | |
| 4 | | | ✓ | |
| 5 | ✓ | | ✓ | |
| 6 | | ✓ | ✓ | |
| 7 | ✓ | ✓ | ✓ | |
| 8 | | | | ✓ |
| 9 | ✓ | | | ✓ |
| A | | ✓ | | ✓ |
| B | ✓ | ✓ | | ✓ |
| C | | | ✓ | ✓ |
| D | ✓ | | ✓ | ✓ |
| E | | ✓ | ✓ | ✓ |
| F | ✓ | ✓ | ✓ | ✓ |

### Location 4: *Audible siren annunciation on arm and disarm*

| Value | Enable Siren Alert |
|---|---|
| 0 | |
| 1 | ✓ |

No sound = System not ready, cannot arm.
Single siren pulse = System armed.
Double siren pulse = System disarmed.
Triple siren pulse = When disarming indicates that a zone was violated while your were out.

## QUESTION 54

**Location 1 = Default link enabled,** **Location 2 = Reserved,**
**Location 3 = Zone response time,** **Location 4 = Reserved.**

### Location 1: *Default link enabled*

Allows panel to be defaulted via default jumper links.

| | |
|---|---|
| 0 | Disabled |
| 1 | Enabled |

### Location 2: *Reserved*

### Location 3: Zone response time (do not change)

### Location 4: *Reserved*



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## QUESTION 55

**Location 1 = Siren trip count,** **Location 2 = Panic key mode,**
**Location 3 = Key tamper,** **Location 4 = Dual reporting**

### Location 1: *Siren trip count*

Sets the number of times that the siren will activate in an armed cycle. This counter does not apply to communications or trigger outputs. Upon disarming the system, the counter is automatically reset.

| L1 | Siren Lockout Count |
|---|---|
| 0 | Count Disabled (Default) |
| 1 | 1 |
| 2 | 2 |
| 3 | 3 |
| 4 | 4 |
| 5 | 5 |
| 6 | 6 |
| 7 | 7 |
| 8 | 8 |
| 9 | 9 |
| A | 10 |
| B | 11 |
| C | 12 |
| D | 13 |
| E | 14 |
| F | 15 |

### Location 2: *Keypad panic mode*

Selects the panic key on the keypad as audible or silent per partition.

| Value | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
|---|---|---|---|---|
| **0** | | | | |
| **1** | ✓ | | | |
| **2** | | ✓ | | |
| **3** | ✓ | ✓ | | |
| **4** | | | ✓ | |
| **5** | ✓ | | ✓ | |
| **6** | | ✓ | ✓ | |
| **7** | ✓ | ✓ | ✓ | |
| **8** | | | | ✓ |
| **9** | ✓ | | | ✓ |
| **A** | | ✓ | | ✓ |
| **B** | ✓ | ✓ | | ✓ |
| **C** | | | ✓ | ✓ |
| **D** | ✓ | | ✓ | ✓ |
| **E** | | ✓ | ✓ | ✓ |
| **F** | ✓ | ✓ | ✓ | ✓ |

### Location 3: *Keypad tamper*

Key tamper initiates an alarm condition after 21 incorrect key depressions on the keypad.

| | |
|---|---|
| 0 | Disabled |
| 1 | Enabled |



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### Question 55

**Location 4:** Dual reporting

Dual reporting enabled will communicate any condition to both primary and secondary telephone numbers, If dual reporting is not selected the communicator will dial the primary number with the secondary number as a backup in the event that the primary communication is not successful.

| | |
|---|---|
| 0 | Disabled |
| 1 | Enabled |

# Communication Options:

### DIALER OPTIONS:

### QUESTION 56

**Location 1 = Enable dialer, Location 2 = Dial attempts,**
**Location 3 = Ring count, Location 4 = Reporting format.**

**Location 1:** *Enable onboard dialer*

| | |
|---|---|
| 0 | Disabled |
| 1 | Enabled |

**Location 2:** *Dial attempts*

Enables the number of attempts to be tried on each telephone number, in the event a successful communication has not been established.

| Value | Dial Attempts |
|---|---|
| **0** | 1 |
| **1** | 2 |
| **2** | 3 |
| **3** | 4 |
| **4** | 5 |
| **5** | 6 |
| **6** | 7 |
| **7** | 8 (Default) |
| **8** | 9 |
| **9** | 10 |
| **A** | 11 |
| **B** | 12 |
| **C** | 13 |
| **D** | 14 |
| **E** | 15 |
| **F** | 16 |



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### QUESTION 56

**Location 3**: *Ring count*
Select the number of rings that the telephone will ring before the control panel picks up the incoming call. This feature is used for up and down loading.

| Value | Ring Count |
|---|---|
| **0** | Disable auto-answer |
| **1** | 2 |
| **2** | 4 |
| **3** | 6 |
| **4** | 8 |
| **5** | 10 |
| **6** | 12 |
| **7** | 14 |
| **8** | 16 |
| **9** | 18 |
| **A** | 20 |
| **B** | 22 |
| **C** | 24 |
| **D** | 26 |
| **E** | 28 |
| **F** | 30 |

**Location 4:** *Reporting format*
Select the desired format required by the monitoring centers base station for landline communications.

| Value | Primary Formats |
|---|---|
| **0** | ADEMCO 4 x 1 Express |
| **1** | ADEMCO 4 x 2 Express |
| **2** | ADEMCO Point ID (Default) |
| **3** | Pulse 4 x 2 No parity 20PPS |

# Serial Radio Transmitter Options:

### QUESTION 57

**Location 1 = Reserved , 2 = Enable serial Tx,**
**Location 3 = Reserved, 4 = Reserved.**

**Location 2:** *Enable serial Tx*

| | |
|---|---|
| 0 | Disabled |
| 1 | Enabled |



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# Remote or onboard expansion

## QUESTION 58

Selects zones 9 to 16 of being either plug in on the control panel or being on a remote expander.

**Location 1 = Zone 9 to 16 expansion,** **Location 2 = Reserved,**
**Location 3 = Error beep enable,** **Location 4 = Telco fault timer.**

### Location 1

| | |
|---|---|
| 0 | Onboard |
| 1 | Remote |

### Location 3

| | |
|---|---|
| 0 | Disable |
| 1 | Enable |

### Location 4

| | |
|---|---|
| 0 | Disable |
| 1 | 2 minutes |
| 2 | 4 minutes |
| 3 | 6 minutes |
| 4 | 8 minutes |
| 5 | 10 minutes |
| 6 | 12 minutes |
| 7 | 14 minutes |
| 8 | 16 minutes |
| 9 | 18 minutes |
| A | 20 minutes |
| B | 22 minutes |
| C | 24 minutes |
| D | 26 minutes |
| E | 28 minutes |
| F | 30 minutes |

## QUESTION 59

**AUTO TEST TIME**
Sets the time that the land-line communicator and/or the serial TX will transmit a test signal. The delay period between these signals being set in Question 52 - L1.

**Location 1 = Hours x 10,** **Location 2 = Hours x 1,**
**Location 3 = Minutes x 10,** **Location 4 = Minutes x 1.**



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# Keypad Zones:

## QUESTION 60

**Location 1 = Reserved,** **Location 2 = Reserved,**
**Location 3 = Active keypad zones 17 to 20,** **Location 4 = Active keypad zones 21 to 24.**

### Location 3: *Active keypad zones 17 to 20*

This location determines whether zones 17 to 20 are keypad zones or expander zones. If selected as keypad zones, then the corresponding zone number on the zone expander will be ignored.
Keypad number 1 will be zone number 17
Keypad number 2 will be zone number 18 etc.

| Value | Key pad Zone 17 | Keypad Zone 18 | Keypad Zone 19 | Keypad Zone 20 |
|---|---|---|---|---|
| 0 | | | | |
| 1 | ✓ | | | |
| 2 | | ✓ | | |
| 3 | ✓ | ✓ | | |
| 4 | | | ✓ | |
| 5 | ✓ | | ✓ | |
| 6 | | ✓ | ✓ | |
| 7 | ✓ | ✓ | ✓ | |
| 8 | | | | ✓ |
| 9 | ✓ | | | ✓ |
| A | | ✓ | | ✓ |
| B | ✓ | ✓ | | ✓ |
| C | | | ✓ | ✓ |
| D | ✓ | | ✓ | ✓ |
| E | | ✓ | ✓ | ✓ |
| F | ✓ | ✓ | ✓ | ✓ |

## QUESTION 60

### Location 4: *Active keypad zones 21 to 24.*

This location determines whether zones 21 to 24 are keypad zones or expander zones.
If selected as keypad zones, then the corresponding zones on a zone expander will be ignored.

| Value | Keypad Zone 21 | Keypad Zone 22 | Keypad Zone 23 | Keypad Zone 24 |
|---|---|---|---|---|
| 0 | | | | |
| 1 | ✓ | | | |
| 2 | | ✓ | | |
| 3 | ✓ | ✓ | | |
| 4 | | | ✓ | |
| 5 | ✓ | | ✓ | |
| 6 | | ✓ | ✓ | |
| 7 | ✓ | ✓ | ✓ | |
| 8 | | | | ✓ |
| 9 | ✓ | | | ✓ |
| A | | ✓ | | ✓ |
| B | ✓ | ✓ | | ✓ |
| C | | | ✓ | ✓ |
| D | ✓ | | ✓ | ✓ |
| E | | ✓ | ✓ | ✓ |
| F | ✓ | ✓ | ✓ | ✓ |



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### QUESTION 61

Not used.

### QUESTION 62

Not used.

## Reporting Codes:

### QUESTION 63

Location 1 = Opening, Location 2 = Reserved,
Location 3 = Bypass, Location 4 = Reserved.

### QUESTION 64

Location 1 = Quick arm, Location 2 = Reserved,
Location 3 = Zone restore, Location 4 = Reserved.

### QUESTION 65

Location 1 = Arm away. Location 2 = Reserved,
Location 3 = Arm home, Location 4 = Reserved.

### QUESTION 66

Reserved

### QUESTION 67

Location 1 = Auto test digit 1, Location 2 = Auto test digit 2,
Location 3 = Auto arm digit 1, Location 4 = Auto arm digit 2.

### QUESTION 68

Location 1 = Duress digit 1, Location 2 = Duress digit 2,
Location 3 = Keypad panic digit 1, Location 4 = Keypad panic digit 2.

### QUESTION 69

Location 1 = Keypad fire digit 1. Location 2 = Keypad fire digit 2,
Location 3 = Keypad medical digit 1, Location 4 = Keypad medical digit .2

### QUESTION 70

Location 1 = Ac fail digit 1, Location 2 = Ac fail digit 2,
Location 3 = Ac restore digit 1, Location 4 = Ac restore digit 2.

### QUESTION 71

Location 1 = Low battery digit 1, Location 2 = Low battery digit 2,
Location 3 = Battery restore digit 1, Location 4 = Battery restore digit 2.



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### QUESTION 72

Location 1 = Keypad tamper digit 1. Location 2 = Keypad tamper digit 2,
Location 3 = Zone tamper digit 1, Location 4 = Reserved.

### QUESTION 73

Location 1 = Time loss digit 1. Location 2 = Time loss digit 2,
Location 3 = Siren tamper digit 1, Location 4 = Siren tamper digit 2.
.

### QUESTION 74

Location 1 = Bus line error digit 1. Location 2 = Bus line error digit 2,
Location 3 = Telco fault digit 1, Location 4 = Telco fault digit 2.

### QUESTION 75

Location 1 = Battery fail digit 1, Location 2 = Battery fail digit 2,
Location 3 = Panel tamper digit 1, Location 4 = Panel tamper digit 2.

## Account numbers:

The system allows for 2 by 4 digit account numbers, that precede any communications to the monitoring center for client identification purposes.

**QUESTION 76** = Partition 1 primary account number.

**QUESTION 77** = Partition 2 primary account number.

**QUESTION 78** = Partition 3 primary account number.

**QUESTION 79** = Partition 4 primary account number.

**QUESTION 80** = Partition 1 secondary account number.

**QUESTION 81** = Partition 2 secondary account number.

**QUESTION 82** = Partition 3 secondary account number.

**QUESTION 83** = Partition 4 secondary account number.

## Telephone numbers:

The system allows for 2 independent 16-digit telephone numbers that will be dialed in the event of an alarm condition. To disable a location enter the value “F”.

**QUESTION 84** = Primary telephone number digits 1 to 4.

**QUESTION 85** = Primary telephone number digits 5 to 8.

**QUESTION 86** = Primary telephone number digits 9 to 12.

**QUESTION 87** = Primary telephone number digits 13 to 16.

**QUESTION 88** = Secondary telephone number digits 1 to 4.

**QUESTION 89** = Secondary telephone number digits 2 to 8.



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**QUESTION 90** = Secondary telephone number digits 9 to 12.

**QUESTION 91** = Secondary telephone number digits 13 to 16.

**QUESTION 92** = Reserved.

**QUESTION 93** = Reserved.

**QUESTION 94** = Reserved.

**QUESTION 95** = Reserved.

**QUESTION 96 =** Call me cell number digits 1 to 4.

**QUESTION 97** = Call me cell number digits 5 to 8.

**QUESTION 98** = Call me cell number digits 9 to 12.

**QUESTION 99** = Call me cell number digits 13 to 16.

# Trigger timers

## QUESTION 100

Location 1 = Trigger 1 timer, Location 2 = Trigger 2 timer,
Location 3 = Trigger 3 timer, Location 4 = Trigger 4 timer.

## QUESTION 101

Location 1 = Trigger 5 timer, Location 2 = Trigger 6 timer,
Location 3 = Trigger 7 timer, Location 4 = Trigger 8 timer.

| Value | Delay times |
|---|---|
| **0** | 2 Seconds |
| **1** | 4 Seconds |
| **2** | 6 Seconds |
| **3** | 10 Seconds |
| **4** | 20 Seconds |
| **5** | 30 Seconds |
| **6** | 40 Seconds |
| **7** | 50 Seconds |
| **8** | 1 Minute |
| **9** | 1.5 Minutes |
| **A** | 2 Minutes |
| **B** | 2.5 Minutes |
| **C** | 3 Minutes |
| **D** | 3.5 Minutes |
| **E** | 4 Minutes |
| **F** | 4.25 Minutes |

## QUESTION 102

Location 1 = Trigger 9 timer, Location 2 = Trigger 10 timer,
Location 3 = Trigger 11 timer, Location 4 = Trigger 12 timer.



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### QUESTION 103.

Location 1 = Trigger 13 timer, Location 2 = Trigger 14 timer,
Location 3 = Trigger 15 timer, Location 4 = Trigger 16 timer.

### QUESTION 104

Location 1 = Trigger 17 timer, Location 2 = Trigger 18 timer,
Location 3 = Trigger 19 timer, Location 4 = Trigger 20 timer.

### QUESTION 105

Location 1 = Trigger 21 timer, Location 2 = Trigger 22 timer,
Location 3 = Trigger 23 timer, Location 4 = Trigger 24 timer.

### QUESTION 106

Location 1 = Trigger 25 timer, Location 2 = Trigger 26 timer,
Location 3 = Trigger 27 timer, Location 4 = Trigger 28 timer.

### QUESTION 107

Location 1 = Trigger 29 timer, Location 2 = Trigger 30 timer,
Location 3 = Trigger 31 timer, Location 4 = Trigger 32 timer.

# Trigger default polarity:

### QUESTION 108

**Location 1 = Trigger output defaults T1 to T4, Location 2 = Trigger output defaults T5 to T8**
**Location 3 = Trigger output defaults T9 to T12, Location 4 = Trigger output defaults T13 to T16.**

**Location 1:** *(Preset the +12v state of the outputs)*
Presets the default polarity of each output on power-up. The default is (0) negative which allows a positive trigger output.

| Value | Output 1 Positive | Output 2 Positive | Output 3 Positive | Output 4 Positive |
|---|---|---|---|---|
| 0 | | | | |
| 1 | ✓ | | | |
| 2 | | ✓ | | |
| 3 | ✓ | ✓ | | |
| 4 | | | ✓ | |
| 5 | ✓ | | ✓ | |
| 6 | | ✓ | ✓ | |
| 7 | ✓ | ✓ | ✓ | |
| 8 | | | | ✓ |
| 9 | ✓ | | | ✓ |
| A | | ✓ | | ✓ |
| B | ✓ | ✓ | | ✓ |
| C | | | ✓ | ✓ |
| D | ✓ | | ✓ | ✓ |
| E | | ✓ | ✓ | ✓ |
| F | ✓ | ✓ | ✓ | ✓ |



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**Location 2**: *(Preset the +12v state of the Outputs).*
Presets the default polarity of output number 5 to output 8.

| Value | Output 5 Positive | Output 6 Positive | Output 7 Positive | Output 8 Positive |
|---|---|---|---|---|
| 0 | | | | |
| 1 | ✓ | | | |
| 2 | | ✓ | | |
| 3 | ✓ | ✓ | | |
| 4 | | | ✓ | |
| 5 | ✓ | | ✓ | |
| 6 | | ✓ | ✓ | |
| 7 | ✓ | ✓ | ✓ | |
| 8 | | | | ✓ |
| 9 | ✓ | | | ✓ |
| A | | ✓ | | ✓ |
| B | ✓ | ✓ | | ✓ |
| C | | | ✓ | ✓ |
| D | ✓ | | ✓ | ✓ |
| E | | ✓ | ✓ | ✓ |
| F | ✓ | ✓ | ✓ | ✓ |

**Location 3**: *(Preset the +12v state of the Outputs).*
Presets the default polarity of output number 9 to output 12.

| Value | Output 9 Positive | Output 10 Positive | Output 11 Positive | Output 12 Positive |
|---|---|---|---|---|
| 0 | | | | |
| 1 | ✓ | | | |
| 2 | | ✓ | | |
| 3 | ✓ | ✓ | | |
| 4 | | | ✓ | |
| 5 | ✓ | | ✓ | |
| 6 | | ✓ | ✓ | |
| 7 | ✓ | ✓ | ✓ | |
| 8 | | | | ✓ |
| 9 | ✓ | | | ✓ |
| A | | ✓ | | ✓ |
| B | ✓ | ✓ | | ✓ |
| C | | | ✓ | ✓ |
| D | ✓ | | ✓ | ✓ |
| E | | ✓ | ✓ | ✓ |
| F | ✓ | ✓ | ✓ | ✓ |



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**Location 4**: *(Preset the +12v state of the Outputs).*
Presets the default polarity of output number 13 to output 16.

| Value | Output 13 Positive | Output 14 Positive | Output 15 Positive | Output 16 Positive |
|---|---|---|---|---|
| 0 | | | | |
| 1 | ✓ | | | |
| 2 | | ✓ | | |
| 3 | ✓ | ✓ | | |
| 4 | | | ✓ | |
| 5 | ✓ | | ✓ | |
| 6 | | ✓ | ✓ | |
| 7 | ✓ | ✓ | ✓ | |
| 8 | | | | ✓ |
| 9 | ✓ | | | ✓ |
| A | | ✓ | | ✓ |
| B | ✓ | ✓ | | ✓ |
| C | | | ✓ | ✓ |
| D | ✓ | | ✓ | ✓ |
| E | | ✓ | ✓ | ✓ |
| F | ✓ | ✓ | ✓ | ✓ |

## QUESTION 109

**Location 1 = Trigger output defaults T17 to T20,** **Location 2 = Trigger output defaults T21 to T24**
**Location 3 = Trigger output defaults T25 to T28,** **Location 4 = Trigger output defaults T29 to T32.**

**Location 1:** *(Preset the +12v state of the outputs)*
Presets the default polarity of each output on power-up. The default is (0) negative which allows a positive trigger output.

| Value | Output 17 Positive | Output 18 Positive | Output 19 Positive | Output 20 Positive |
|---|---|---|---|---|
| 0 | | | | |
| 1 | ✓ | | | |
| 2 | | ✓ | | |
| 3 | ✓ | ✓ | | |
| 4 | | | ✓ | |
| 5 | ✓ | | ✓ | |
| 6 | | ✓ | ✓ | |
| 7 | ✓ | ✓ | ✓ | |
| 8 | | | | ✓ |
| 9 | ✓ | | | ✓ |
| A | | ✓ | | ✓ |
| B | ✓ | ✓ | | ✓ |
| C | | | ✓ | ✓ |
| D | ✓ | | ✓ | ✓ |
| E | | ✓ | ✓ | ✓ |
| F | ✓ | ✓ | ✓ | ✓ |



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**Location 2**: *(Preset the +12v state of the Outputs).*
Presets the default polarity of output number 21 to output 24.

| Value | Output 21 Positive | Output 22 Positive | Output 23 Positive | Output 24 Positive |
|---|---|---|---|---|
| 0 | | | | |
| 1 | ✓ | | | |
| 2 | | ✓ | | |
| 3 | ✓ | ✓ | | |
| 4 | | | ✓ | |
| 5 | ✓ | | ✓ | |
| 6 | | ✓ | ✓ | |
| 7 | ✓ | ✓ | ✓ | |
| 8 | | | | ✓ |
| 9 | ✓ | | | ✓ |
| A | | ✓ | | ✓ |
| B | ✓ | ✓ | | ✓ |
| C | | | ✓ | ✓ |
| D | ✓ | | ✓ | ✓ |
| E | | ✓ | ✓ | ✓ |
| F | ✓ | ✓ | ✓ | ✓ |

**Location 3**: *(Preset the +12v state of the Outputs).*
Presets the default polarity of output number 25 to output 28.

| Value | Output 25 Positive | Output 26 Positive | Output 27 Positive | Output 28 Positive |
|---|---|---|---|---|
| 0 | | | | |
| 1 | ✓ | | | |
| 2 | | ✓ | | |
| 3 | ✓ | ✓ | | |
| 4 | | | ✓ | |
| 5 | ✓ | | ✓ | |
| 6 | | ✓ | ✓ | |
| 7 | ✓ | ✓ | ✓ | |
| 8 | | | | ✓ |
| 9 | ✓ | | | ✓ |
| A | | ✓ | | ✓ |
| B | ✓ | ✓ | | ✓ |
| C | | | ✓ | ✓ |
| D | ✓ | | ✓ | ✓ |
| E | | ✓ | ✓ | ✓ |
| F | ✓ | ✓ | ✓ | ✓ |



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**Location 4**: *(Preset the +12v state of the Outputs).*
Presets the default polarity of output number 29 to output 32.

| Value | Output 29 Positive | Output 30 Positive | Output 31 Positive | Output 32 Positive |
|---|---|---|---|---|
| **0** | | | | |
| **1** | ✓ | | | |
| **2** | | ✓ | | |
| **3** | ✓ | ✓ | | |
| **4** | | | ✓ | |
| **5** | ✓ | | ✓ | |
| **6** | | ✓ | ✓ | |
| **7** | ✓ | ✓ | ✓ | |
| **8** | | | | ✓ |
| **9** | ✓ | | | ✓ |
| **A** | | ✓ | | ✓ |
| **B** | ✓ | ✓ | | ✓ |
| **C** | | | ✓ | ✓ |
| **D** | ✓ | | ✓ | ✓ |
| **E** | | ✓ | ✓ | ✓ |
| **F** | ✓ | ✓ | ✓ | ✓ |

# Codex remote transmitters:

## QUESTION 110 – QUESTION 119

The system allows for up to ten codex transmitters to be used with the serial bus receiver.
This allows any button to be programmed as, remote open close with user identification, any keypad emergency condition or any trigger output function.

**The remote must be programmed from the keypad in the Partition in which the user will operate.** (end user programming level 9)

## QUESTION 110

Remote 1

**Location 1 = button 1,** **Location 2 = Button 2**
**Location 3 = button 3,** **Location 4 = Button 4.**

| | |
|---|---|
| 0 | Disabled |
| 1 | Trigger |
| 2 | 24 hr Audible |
| 3 | 24 hr silent |
| 4 | Fire |
| 5 | Medical |
| 6 | Keyswitch partition 1 |
| 7 | Keyswitch partition 2 |
| 8 | Keyswitch partition 3 |
| 9 | Keyswitch partition 4 |



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## QUESTION 111

Remote 2

**Location 1 = button 1,** **Location 2 = Button 2**
**Location 3 = button 3,** **Location 4 = Button 4.**

## QUESTION 112

Remote 3

**Location 1 = button 1,** **Location 2 = Button 2**
**Location 3 = button 3,** **Location 4 = Button 4.**

## QUESTION 113

Remote 4

**Location 1 = button 1,** **Location 2 = Button 2**
**Location 3 = button 3,** **Location 4 = Button 4.**

## QUESTION 114

Remote 5

**Location 1 = button 1,** **Location 2 = Button 2**
**Location 3 = button 3,** **Location 4 = Button 4.**

## QUESTION 115

Remote 6

**Location 1 = button 1,** **Location 2 = Button 2**
**Location 3 = button 3,** **Location 4 = Button 4.**

## QUESTION 116

Remote 7

**Location 1 = button 1,** **Location 2 = Button 2**
**Location 3 = button 3,** **Location 4 = Button 4.**

## QUESTION 117

Remote 8

**Location 1 = button 1,** **Location 2 = Button 2**
**Location 3 = button 3,** **Location 4 = Button 4.**

## QUESTION 118

Remote 9

**Location 1 = button 1,** **Location 2 = Button 2**
**Location 3 = button 3,** **Location 4 = Button 4.**



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### QUESTION 119

Remote 10

**Location 1 = button 1,** **Location 2 = Button 2**
**Location 3 = button 3,** **Location 4 = Button 4.**

# Triggers:

### QUESTION 128 - QUESTION 155

The system has 5 onboard programmable voltage trigger outputs and allows for 50 programmable options. The individual trigger output polarity is programmed in QUESTION 108 - L1 & L2.

**Location 1** = A 3-digit input for the trigger function.
**Location 2** = A 2-digit input assigning the trigger number.
**Location 3** = A 1-digit input assigning the trigger output action.

### Location 1: *Three digit trigger event.*

NOTE 1: Zones selected as triggered in the disarm state, may only be selected as timed.

**Trigger events Zones:**

| Trigger event | Zone # | Zone # | Zone # | Zone # |
|---|---|---|---|---|
| Disabled | 000 | 000 | 000 | 000 |
| Zone 1 to 4 triggered (armed) | 001 | 002 | 003 | 004 |
| Zone 5 to 8 triggered (armed) | 005 | 006 | 007 | 008 |
| Zone 9 to 12 triggered (armed) | 009 | 010 | 011 | 012 |
| Zone 13 to 16 triggered (armed) | 013 | 014 | 015 | 016 |
| Zone 1 to 4 triggered (disarmed) | 017 | 018 | 019 | 020 |
| Zone 5 to 8 triggered (disarmed) | 021 | 022 | 023 | 024 |
| Zone 9 to 12triggered (disarmed) | 025 | 026 | 027 | 028 |
| Zone 13 to 16 triggered (disarmed) | 029 | 030 | 031 | 032 |
| Zone 1 to 4 restore | 033 | 034 | 035 | 036 |
| Zone 5 to 8 restore | 037 | 038 | 039 | 040 |
| Zone 9 to 12 restore | 041 | 042 | 043 | 044 |
| Zone 13 to 16 restore | 045 | 046 | 047 | 048 |
| Zone 1 to 4 tamper | 049 | 050 | 051 | 052 |
| Zone 5 to 8 tamper | 053 | 054 | 055 | 056 |
| Zone 9 to 12 tamper | 057 | 058 | 059 | 060 |
| Zone 13 to 16 tamper | 061 | 062 | 063 | 064 |



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## Trigger events System:

| Trigger event | Event # |
|---|---|
| Mains fail | 065 |
| Mains restore | 066 |
| Battery low | 067 |
| Battery restore | 068 |
| Comms fail | 069 |
| Panic Trigger | 070 |
| Tamper trigger | 071 |
| | |
| System auto test | 073 |
| Comms kiss off received | 074 |
| Call me number dialed | 075 |
| Bus line failure | 076 |
| | |
| Telephone line fault | 078 |
| Telephone line restore | 079 |
| Battery test fail | 080 |
| Siren tamper | 081 |
| System siren on | 084 |
| System siren off | 085 |
| Armed (All partitions) | 086 |
| Disarmed (Any partition) | 087 |

| Trigger event | Partition 1 | Partition 2 | Partition 3 | Partition 4 |
|---|---|---|---|---|
| Burglary | 100 | 101 | 102 | 103 |
| Burglary Silent | 104 | 105 | 106 | 107 |
| Fire alarm | 108 | 109 | 110 | 111 |
| 24 hour silent | 112 | 113 | 114 | 115 |
| 24 hour audible | 116 | 117 | 118 | 119 |
| Siren on per partition | 120 | 121 | 122 | 123 |
| Siren off per partition | 124 | 125 | 126 | 127 |
| Duress code | 128 | 129 | 130 | 131 |
| Partition armed | 132 | 133 | 134 | 135 |
| Partition auto armed | 136 | 137 | 138 | 139 |
| Partition disarmed | 140 | 141 | 142 | 143 |
| Door strike code | 144 | 145 | 146 | 147 |
| # Key | 148 | 149 | 150 | 151 |
| Keypad panic | 152 | 153 | 154 | 155 |
| Keypad fire | 156 | 157 | 158 | 159 |
| Keypad medical | 160 | 161 | 162 | 163 |
| Keypad tamper | 164 | 165 | 166 | 167 |
| Zone tamper | 168 | 169 | 170 | 171 |
| | 172 | 173 | 174 | 175 |
| | 176 | 177 | 178 | 179 |
| Exit timer start | 180 | 181 | 182 | 183 |
| Entry timer start | 184 | 185 | 186 | 187 |
| Exit timer end | 188 | 189 | 190 | 191 |



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| Codex remote Transmitter | Button 1 | Button 2 | Button 3 | Button 4 |
|---|---|---|---|---|
| Remote number 1 | 192 | 193 | 194 | 195 |
| Remote number 2 | 196 | 197 | 198 | 199 |
| Remote number 3 | 200 | 201 | 202 | 203 |
| Remote number 4 | 204 | 205 | 206 | 207 |
| Remote number 5 | 208 | 209 | 210 | 211 |
| Remote number 6 | 212 | 213 | 214 | 215 |
| Remote number 7 | 216 | 217 | 218 | 219 |
| Remote number 8 | 220 | 221 | 222 | 223 |
| Remote number 9 | 224 | 225 | 226 | 227 |
| Remote number 10 | 228 | 229 | 230 | 231 |

**Location 2:** *Two-digit trigger number from 01 to 64.*

NOTE. A function may be programmed as 00 which will reset all triggers to their programmed default state e.g. (switched off)

| Trigger number | Description |
|---|---|
| 00 | Reset all triggers |
| 01 | Trigger 1 on the control panel |
| 02 | Trigger 2 on the control panel |
| 03 | Trigger 3 on the control panel |
| 04 | Trigger 4 on the control panel |
| 05 | Trigger 5 on the control panel |

**Location 3:** *Single digit trigger function.*

| Value | Trigger action |
|---|---|
| 0 | Latch trigger to positive 12v |
| 1 | Latch trigger to negative 12v |
| 2 | Timed |
| 3 | Toggle trigger state |



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# Ademco Point ID Reporting Codes:

**BURGLARY TYPES** **24-HOUR**

| Description | Digit 1 | Digit 2 | Event Code | | Description | Digit 1 | Digit 2 | Event Code |
|---|---|---|---|---|---|---|---|---|
| Audible panic | 0 | 0 | 123 | | | 0 | 0 | 112 |
| Burglary | 1 | 0 | 130 | | Medical | 1 | 0 | 100 |
| Perimeter | 2 | 0 | 131 | | Fire | 2 | 0 | 110 |
| Interior | 3 | 0 | 132 | | Smoke | 3 | 0 | 111 |
| Silent Instant | 4 | 0 | 146 | | Panic | 4 | 0 | 120 |
| Entry/Exit | 5 | 0 | 134 | | Duress | 5 | 0 | 121 |
| Day/Night | 6 | 0 | 135 | | Silent panic | 6 | 0 | 122 |
| Out door | 7 | 0 | 136 | | Audible panic | 7 | 0 | 123 |
| Tamper | 8 | 0 | 137 | | 24-hour | 8 | 0 | 133 |
| Silent Panic | 9 | 0 | 122 | | Tamper | 9 | 0 | 137 |
| NULL (disable) | A | A | | | Disabled | A | A | |
| General Alarm | B | 0 | 140 | | Refrigeration | B | 0 | 152 |
| Foil Break | C | 0 | 155 | | Water leak | C | 0 | 154 |
| Day Trouble | D | 0 | 156 | | 24-hour non burg | D | 0 | 150 |
| Sensor Tamper | E | 0 | 144 | | Pendent transmitter | E | 0 | 101 |
| Pendant transmitter | F | 0 | 101 | | Gas detect | F | 0 | 151 |

**GENERAL TYPES**

| Description | Digit 1 | Digit 2 | Event Code |
|---|---|---|---|
| System peripheral trouble | 0 | 0 | 330 |
| AC | 1 | 0 | 301 |
| Low Battery | 2 | 0 | 302 |
| Auto Test | 3 | 0 | 602 |
| Open close by user | 4 | 0 | 401 |
| Auto Arm | 5 | 0 | 403 |
| Cancel On Open | 6 | 0 | 406 |
| Remote Arm | 7 | 0 | 407 |
| Zone Bypass | 8 | 0 | 570 |
| Fire Zone Bypass | 9 | 0 | 571 |
| Disabled | A | A | |
| 24-hour Bypass | B | 0 | 572 |
| Quick Arm | C | 0 | 408 |
| Arm Home | D | 0 | 441 |
| Key Switch | E | 0 | 409 |
| Time Date Inaccurate | F | 0 | 626 |
| Bell trouble | 0 | 1 | 321 |
| Telco fault | 1 | 1 | 351 |
| Battery test fail | 2 | 1 | 309 |



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# HSC 505-E PROGRAMMING WORK SHEET

Installer code is changed in question # 00

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 1 | Zone 1 | | | | | 1110 |

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 2 | Zone 2 | | | | | 2110 |

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 3 | Zone 3 | | | | | 3110 |

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 4 | Zone 4 | | | | | 3110 |

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 5 | Zone 5 | | | | | 3110 |

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 6 | Zone 6 | | | | | 3110 |

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 7 | Zone 7 | | | | | 3110 |

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 8 | Zone 8 | | | | | 3110 |

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 9 | Zone 9 | | | | | 3110 |

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 10 | Zone 10 | | | | | 3110 |

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 11 | Zone 11 | | | | | 3110 |

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 12 | Zone 12 | | | | | 3110 |

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 13 | Zone 13 | | | | | 3110 |

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 14 | Zone 14 | | | | | 3110 |

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 15 | Zone 15 | | | | | 3110 |

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 16 | Zone 16 | | | | | 3110 |

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 17 | Zone 17 | | | | | 00AA |

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 18 | Zone 18 | | | | | 00AA |

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 19 | Zone 19 | | | | | 00AA |



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| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 20 | Zone 20 | | | | | 00AA |

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 21 | Zone 21 | | | | | 00AA |

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 22 | Zone 22 | | | | | 00AA |

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 23 | Zone 23 | | | | | 00AA |

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 24 | Zone 24 | | | | | 00AA |

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 25 | Zone 25 | | | | | 00AA |

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 26 | Zone 26 | | | | | 00AA |

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 27 | Zone 27 | | | | | 00AA |

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 28 | Zone 28 | | | | | 00AA |

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 29 | Zone 29 | | | | | 00AA |

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 30 | Zone 30 | | | | | 00AA |

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 31 | Zone 31 | | | | | 00AA |

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 32 | Zone 32 | | | | | 00AA |

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 33 | Panic input | | | | | A1AA |

| Question | Description | Zone type | Partition # | Rep code d1 | Rep code d2 | Default |
|---|---|---|---|---|---|---|
| 34 | Tamper input | | | | | A1AA |

| Question | Description | Reserved | Reserved | Reserved | Reserved | Default |
|---|---|---|---|---|---|---|
| 35 | Reserved | | | | | 11AA |

| Question | Description | Keypad 1 | Keypad 2 | Keypad 3 | Keypad 4 | Default |
|---|---|---|---|---|---|---|
| 36 | Partition # | | | | | 1111 |

| Question | Description | Keypad 5 | Keypad 6 | Keypad 7 | Keypad 8 | Default |
|---|---|---|---|---|---|---|
| 37 | Partition # | | | | | 1111 |

| Question | Description | 1 to 4 | 5 to 8 | 9 to 12 | 13 to 16 | Default |
|---|---|---|---|---|---|---|
| 38 | Home zones | | | | | 0000 |

| Question | Description | 17 to 20 | 21 to 24 | 25 to 28 | 29 to 32 | Default |
|---|---|---|---|---|---|---|
| 39 | Home zones | | | | | 0000 |



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| Question | Description | 1 to 4 | 5 to 8 | 9 to 12 | 13 to 16 | Default |
|---|---|---|---|---|---|---|
| 40 | Zone tamp | | | | | 0000 |

| Question | Description | 1 to 4 | 5 to 8 | 9 to 12 | 13 to 16 | Default |
|---|---|---|---|---|---|---|
| 41 | Bypass | | | | | 0000 |

| Question | Description | 17 to 20 | 21 to 24 | 25 to 28 | 29 to 32 | Default |
|---|---|---|---|---|---|---|
| 42 | Bypass | | | | | 0000 |

| Question | Description | Partition 1 | Partition 2 | Partition 3 | Partition 4 | Default |
|---|---|---|---|---|---|---|
| 43 | Auto arm | | | | | 0000 |

| Question | Description | Hours x 10 | Hours x 1 | Minutesx10 | Minutes x 1 | Default |
|---|---|---|---|---|---|---|
| 44 | A/A time p1 | | | | | 24000 |

| Question | Description | Hours x 10 | Hours x 1 | Minutesx10 | Minutes x 1 | Default |
|---|---|---|---|---|---|---|
| 45 | A/A time p2 | | | | | 24000 |

| Question | Description | Hours x 10 | Hours x 1 | Minutesx10 | Minutes x 1 | Default |
|---|---|---|---|---|---|---|
| 46 | A/A time p3 | | | | | 2400 |

| Question | Description | Hours x 10 | Hours x 1 | Minutesx10 | Minutes x 1 | Default |
|---|---|---|---|---|---|---|
| 47 | A/A time p4 | | | | | 2400 |

| Question | Description | Partition 1 | Partition 2 | Partition 3 | Partition 4 | Default |
|---|---|---|---|---|---|---|
| 48 | Entry | | | | | 4444 |

| Question | Description | Partition 1 | Partition 2 | Partition 3 | Partition 4 | Default |
|---|---|---|---|---|---|---|
| 49 | Exit | | | | | 5555 |

| Question | Description | 17 to 20 | 21 to24 | 25 to 28 | 29 to 30 | Default |
|---|---|---|---|---|---|---|
| 50 | Zone tamper | | | | | 0000 |

| Question | Description | Reserved | Reserved | Reserved | Reserved | Default |
|---|---|---|---|---|---|---|
| 51 | Timers | | | | | 0000 |

| Question | Description | Test delay | Dial delay | Ac fail | Siren | Default |
|---|---|---|---|---|---|---|
| 52 | Timers | | | | | 50CC |

| Question | Description | Fast arm | Fast bypass | Arm faulted | Siren alert | Default |
|---|---|---|---|---|---|---|
| 53 | Arm option | | | | | 0001 |

| Question | Description | Default | Reserved | Response | Reserved | Default |
|---|---|---|---|---|---|---|
| 54 | System | | | | | 1090 |

| Question | Description | Siren count | Panic key | Key tamper | Dual report | Default |
|---|---|---|---|---|---|---|
| 55 | System | | | | | 0000 |

| Question | Description | Enable dial | Dial attempt | Ring count | Formats | Default |
|---|---|---|---|---|---|---|
| 56 | Dialer option | | | | | 0762 |

| Question | Description | Reserved | Enable Tx | Reserved | Reserved | Default |
|---|---|---|---|---|---|---|
| 57 | Serial TX | | | | | 3020 |

| Question | Description | Exp option | Reserved | Err beep | Telco timer | Default |
|---|---|---|---|---|---|---|
| 58 | Zone 9 to 16 | | | | | 0010 |

| Question | Description | Hours x 10 | Hours x 1 | Minutesx10 | Minutes x 1 | Default |
|---|---|---|---|---|---|---|
| 59 | Test time | | | | | 2400 |



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| Question | Description | Reserved | Reserved | K/p zones | K/p zones | Default |
|---|---|---|---|---|---|---|
| 60 | System | | | | | 0000 |

| Question | Description | Reserved | Reserved | Reserved | Reserved | Default |
|---|---|---|---|---|---|---|
| 61 | Reserved | | | | | 0000 |

| Question | Description | Reserved | Reserved | Reserved | Reserved | Default |
|---|---|---|---|---|---|---|
| 62 | Reserved | | | | | 0000 |

| Question | Description | Open | Reserved | Bypass | Reserved | Default |
|---|---|---|---|---|---|---|
| 63 | Reporting | | | | | 4080 |

| Question | Description | Quick arm | Reserved | Zone restore | Reserved | Default |
|---|---|---|---|---|---|---|
| 64 | Reporting | | | | | C0AA |

| Question | Description | Arm away | Reserved | Arm home | Reserved | Default |
|---|---|---|---|---|---|---|
| 65 | Reporting | | | | | 40D0 |

| Question | Description | Reserved | Reserved | Reserved | Reserved | Default |
|---|---|---|---|---|---|---|
| 66 | Reserved | | | | | AAAA |

| Question | Description | Auto test d1 | Auto test d2 | Auto arm | Auto Arm | Default |
|---|---|---|---|---|---|---|
| 67 | Reporting | | | | | 3050 |

| Question | Description | Duress | Duress | K/pad panic | K/pad panic | Default |
|---|---|---|---|---|---|---|
| 68 | Reporting | | | | | 5040 |

| Question | Description | K/pad fire | K/pad fire | K/pad med | K/pad med | Default |
|---|---|---|---|---|---|---|
| 69 | Reporting | | | | | 2010 |

| Question | Description | Ac fail | Ac fail | Ac restore | Ac restore | Default |
|---|---|---|---|---|---|---|
| 70 | Reporting | | | | | 10AA |

| Question | Description | Low bat | Low bat | Bat restore | Bat restore | Default |
|---|---|---|---|---|---|---|
| 71 | Reporting | | | | | 20AA |

| Question | Description | Key tamper | Key tamper | Zone tamp | Reserved | Default |
|---|---|---|---|---|---|---|
| 72 | Reporting | | | | | 9080 |

| Question | Description | Time loss | Time loss | Siren tamp | Siren tamp | Default |
|---|---|---|---|---|---|---|
| 73 | Reporting | | | | | F001 |

| Question | Description | Bus error | Bus error | Telco fault | Telco fault | Default |
|---|---|---|---|---|---|---|
| 74 | Reporting | | | | | 0011 |

| Question | Description | Battery fail | Battery fail | Panel tamp | Panel tamp | Default |
|---|---|---|---|---|---|---|
| 75 | Reporting | | | | | 21AA |

| Question | Primary acc | Digit 1 | Digit 2 | Digit 3 | Digit 4 | Default |
|---|---|---|---|---|---|---|
| 76 | Partition 1 | | | | | 1234 |

| Question | Primary acc | Digit 1 | Digit 2 | Digit 3 | Digit 4 | Default |
|---|---|---|---|---|---|---|
| 77 | Partition 2 | | | | | FFFF |

| Question | Primary acc | Digit 1 | Digit 2 | Digit 3 | Digit 4 | Default |
|---|---|---|---|---|---|---|
| 78 | Partition 3 | | | | | FFFF |

| Question | Primary acc | Digit 1 | Digit 2 | Digit 3 | Digit 4 | Default |
|---|---|---|---|---|---|---|
| 79 | Partition 4 | | | | | FFFF |



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| Question | Second acc | Digit 1 | Digit 2 | Digit 3 | Digit 4 | Default |
|---|---|---|---|---|---|---|
| 80 | Partition 1 | | | | | FFFF |

| Question | Second acc | Digit 1 | Digit 2 | Digit 3 | Digit 4 | Default |
|---|---|---|---|---|---|---|
| 81 | Partition 2 | | | | | FFFF |

| Question | Second acc | Digit 1 | Digit 2 | Digit 3 | Digit 4 | Default |
|---|---|---|---|---|---|---|
| 82 | Partition 3 | | | | | FFFF |

| Question | Second acc | Digit 1 | Digit 2 | Digit 3 | Digit 4 | Default |
|---|---|---|---|---|---|---|
| 83 | Partition 4 | | | | | FFFF |

| Question | Primary | Digit 1 | Digit 2 | Digit 3 | Digit 4 | Default |
|---|---|---|---|---|---|---|
| 84 | Phone no. | | | | | FFFF |

| Question | Primary | Digit 5 | Digit 6 | Digit 7 | Digit 8 | Default |
|---|---|---|---|---|---|---|
| 85 | Phone no. | | | | | FFFF |

| Question | Primary | Digit 9 | Digit 10 | Digit 11 | Digit 12 | Default |
|---|---|---|---|---|---|---|
| 86 | Phone no. | | | | | FFFF |

| Question | Primary | Digit 13 | Digit 14 | Digit 15 | Digit 16 | Default |
|---|---|---|---|---|---|---|
| 87 | Phone no. | | | | | FFFF |

| Question | Secondary | Digit 1 | Digit 2 | Digit 3 | Digit 4 | Default |
|---|---|---|---|---|---|---|
| 88 | Phone no. | | | | | FFFF |

| Question | Secondary | Digit 5 | Digit 6 | Digit 7 | Digit 8 | Default |
|---|---|---|---|---|---|---|
| 89 | Phone no. | | | | | FFFF |

| Question | Secondary | Digit 9 | Digit 10 | Digit 11 | Digit 12 | Default |
|---|---|---|---|---|---|---|
| 90 | Phone no. | | | | | FFFF |

| Question | Secondary | Digit 13 | Digit 14 | Digit 15 | Digit 16 | Default |
|---|---|---|---|---|---|---|
| 91 | Phone no. | | | | | FFFF |

| Question | Reserved | Reserved | Reserved | Reserved | Reserved | Default |
|---|---|---|---|---|---|---|
| 92 | Reserved | | | | | FFFF |

| Question | Reserved | Reserved | Reserved | Reserved | Reserved | Default |
|---|---|---|---|---|---|---|
| 93 | Reserved | | | | | FFFF |

| Question | Reserved | Reserved | Reserved | Reserved | Reserved | Default |
|---|---|---|---|---|---|---|
| 94 | Reserved | | | | | FFFF |

| Question | Reserved | Reserved | Reserved | Reserved | Reserved | Default |
|---|---|---|---|---|---|---|
| 95 | Reserved | | | | | FFFF |

| Question | Description | Digit 1 | Digit 2 | Digit 3 | Digit 4 | Default |
|---|---|---|---|---|---|---|
| 96 | Call me | | | | | FFFF |

| Question | Description | Digit 5 | Digit 6 | Digit 7 | Digit 8 | Default |
|---|---|---|---|---|---|---|
| 97 | Call me | | | | | FFFF |

| Question | Description | Digit 9 | Digit 10 | Digit 11 | Digit 12 | Default |
|---|---|---|---|---|---|---|
| 98 | Call me | | | | | FFFF |

| Question | Description | Digit 13 | Digit 14 | Digit 15 | Digit 16 | Default |
|---|---|---|---|---|---|---|
| 99 | Call me | | | | | FFFF |



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| Question | Description | Trigger 1 | Trigger 2 | Trigger 3 | Trigger 4 | Default |
|---|---|---|---|---|---|---|
| 100 | Timers | | | | | 0000 |

| Question | Description | Trigger 5 | Reserved | Reserved | Reserved | Default |
|---|---|---|---|---|---|---|
| 101 | Timers | | | | | 0000 |

| Question | Description | Reserved | Reserved | Reserved | Reserved | Default |
|---|---|---|---|---|---|---|
| 102 | Reserved | | | | | 0000 |

| Question | Description | Reserved | Reserved | Reserved | Reserved | Default |
|---|---|---|---|---|---|---|
| 103 | Reserved | | | | | 0000 |

| Question | Description | Reserved | Reserved | Reserved | Reserved | Default |
|---|---|---|---|---|---|---|
| 104 | Reserved | | | | | 0000 |

| Question | Description | Reserved | Reserved | Reserved | Reserved | Default |
|---|---|---|---|---|---|---|
| 105 | Reserved | | | | | 0000 |

| Question | Description | Reserved | Reserved | Reserved | Reserved | Default |
|---|---|---|---|---|---|---|
| 106 | Reserved | | | | | 0000 |

| Question | Description | Reserved | Reserved | Reserved | Reserved | Default |
|---|---|---|---|---|---|---|
| 107 | Reserved | | | | | 0000 |

| Question | Description | Trigger 1- 4 | Trigger 5 | Reserved | Reserved | Default |
|---|---|---|---|---|---|---|
| 108 | Polarity | | | | | 0000 |

| Question | Description | Reserved | Reserved | Reserved | Reserved | Default |
|---|---|---|---|---|---|---|
| 109 | Reserved | | | | | 0000 |

| Question | Description | Button1 | Button 2 | Button 3 | Button4 | Default |
|---|---|---|---|---|---|---|
| 110 | Remote 1 | | | | | 0000 |

| Question | Description | Button1 | Button 2 | Button 3 | Button4 | Default |
|---|---|---|---|---|---|---|
| 111 | Remote 2 | | | | | 0000 |

| Question | Description | Button1 | Button 2 | Button 3 | Button4 | Default |
|---|---|---|---|---|---|---|
| 112 | Remote 3 | | | | | 0000 |

| Question | Description | Button1 | Button 2 | Button 3 | Button4 | Default |
|---|---|---|---|---|---|---|
| 113 | Remote 4 | | | | | 0000 |

| Question | Description | Button1 | Button 2 | Button 3 | Button4 | Default |
|---|---|---|---|---|---|---|
| 114 | Remote 5 | | | | | 0000 |

| Question | Description | Button1 | Button 2 | Button 3 | Button4 | Default |
|---|---|---|---|---|---|---|
| 115 | Remote 6 | | | | | 0000 |

| Question | Description | Button1 | Button 2 | Button 3 | Button4 | Default |
|---|---|---|---|---|---|---|
| 116 | Remote 7 | | | | | 0000 |

| Question | Description | Button1 | Button 2 | Button 3 | Button4 | Default |
|---|---|---|---|---|---|---|
| 117 | Remote 8 | | | | | 0000 |

| Question | Description | Button1 | Button 2 | Button 3 | Button4 | Default |
|---|---|---|---|---|---|---|
| 118 | Remote 9 | | | | | 0000 |

| Question | Description | Button1 | Button 2 | Button 3 | Button4 | Default |
|---|---|---|---|---|---|---|
| 119 | Remote 10 | | | | | 0000 |



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**QUESTION 120 TO 127 ARE RESERVED FOR FUTURE USE**

# Trigger Outputs:

Trigger outputs are assigned by a 3-digit event code. A 2-digit trigger number and a single digit action event.

| Question | Trigger event 000 - 255 | Trigger number 00 - 63 | Trigger action 0 - 3 |
|---|---|---|---|
| 128 | | | |
| 129 | | | |
| 130 | | | |
| 131 | | | |
| 132 | | | |
| 133 | | | |
| 134 | | | |
| 135 | | | |
| 136 | | | |
| 137 | | | |
| 138 | | | |
| 139 | | | |
| 140 | | | |
| 141 | | | |
| 142 | | | |
| 143 | | | |
| 144 | | | |
| 145 | | | |
| 146 | | | |
| 147 | | | |
| 148 | | | |
| 149 | | | |
| 150 | | | |
| 151 | | | |
| 152 | | | |
| 153 | | | |
| 154 | | | |
| 155 | | | |
| 156 | | | |
| 157 | | | |
| 158 | | | |
| 159 | | | |
| 160 | | | |
| 161 | | | |
| 162 | | | |
| 163 | | | |
| 164 | | | |
| 165 | | | |
| 166 | | | |
| 167 | | | |
| 168 | | | |
| 169 | | | |
| 170 | | | |
| 171 | | | |
| 172 | | | |
| 173 | | | |
| 174 | | | |
| 175 | | | |
| 176 | | | |
| 177 | | | |



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